Ann. Natal Mus. Vol. 34(1) Pages 43–101 Pietermaritzburg October, 1993

A revision of the Afrotropical species of *Tomosvaryella* Aczél, 1939 (Diptera: Pipunculidae)

by

Marc De Meyer
(National Museums of Kenya, P. O. Box 40658, Nairobi, Kenya)

ABSTRACT

The Afrotropical representatives of *Tomosvaryella* Aczél, 1939 are revised to include 41 species. A key to these species is provided. Seventeen new species are described: *angolensis*, *botswanae*, *brachybasis*, *caerulescens*, *crassifemorata*, *flavipes*, *forchhammeri*, *insulicola*, *montana*, *oligoseta*, *ruwenzoriensis*, *singularis*, *singuloides*, *spinigera*, *subafricana*, *tecta* and *transvaalensis*. *T. varana* Hardy, 1949 is synonymised with *T. propria* Hardy, 1949. The female of *T. apicalis* Hardy, 1949 is described for the first time. The male and female terminalia of all species are illustrated. Their phylogenetic relationships are briefly discussed, and a preliminary indication of monophyletic species groups is given.

INTRODUCTION

Pipunculidae (Diptera) are usually small, inconspicuous flies, easily recognised by their large compound eyes, which occupy most of the hemispherical head. They are parasitoids of Auchenorrhyncha (Homoptera) during their larval stage. Pipunculidae are closely related to Syrphidae, but can be readily differentiated from the latter by differences in wing venation (no *vena spuria*). Approximately 900 species are reported worldwide, but the total fauna is estimated at 1500 species (Hardy 1989).

The phylogeny of pipunculid genera has been discussed by Rafael & De Meyer (1992). This study confirmed that *Tomosvaryella* and the mainly Holarctic genus *Dorylomorpha* Aczél form a monophyletic group: the Tribe Tomosvaryellini, as already established by Hardy (1980). Species of *Tomosvaryella* can be differentiated from *Dorylomorpha* by the position of crossvein r-m near the middle of the discal cell (some exceptions in the Afrotropical fauna, see notes on *T. torosa* Hardy and *T. basalis* Hardy), and the short fourth costal section.

Tomosvaryella is a cosmopolitan genus with approximately 140 species, of which 24 were reported from the Afrotropical Region by Hardy (1980). Most of these species were described by D. E. Hardy based on specimens from the National Parks of Zaïre and from South Africa. The only recent addition to the Afrotropical fauna was a species described by De Meyer (1990*b*) from Ethiopia. Within the Afrotropical Region *Tomosvaryella* is predominantly African, but is also recorded from Madagascar, the Comoros and Seychelles.

This article is the third in a series of systematic revisions of the Afrotropical Pipunculidae (De Meyer 1990*a* 1992).

MATERIALS AND METHODS

Approximately 700 specimens were studied. Type specimens and other material were kindly loaned to me by the following institutions and curators:

BMNH — Natural History Museum, London, UK (N. P. Wyatt)
CASC — California Academy of Sciences, San Francisco, USA (P. H. Arnaud Jr.)
IMS — Insect Museum, Serowe, Botswana (P. Forchhammer)
ISNB — Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium (P. Grootaert)
MCZC — Museum of Comparative Zoology, Cambridge, USA (C. T. Graham)
MRAC — Musée Royal de l'Afrique Centrale, Tervuren, Belgium (E. De Coninck)
NMKE — National Museums of Kenya, Nairobi, Kenya (R. Bagine)
NMSA — Natal Museum, Pietermaritzburg, South Africa (A. E. Whittington)
SANC — National Collection of Insects, Plant Protection Research Institute Pretoria, South Africa (M. W. Mansell)
TAUI — Tel Aviv University, Tel Aviv, Israel (A. Freidberg)
ZMHB — Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany (H. Schumann)

Terminology follows Albrecht (1990), but the genitalia were prepared and described as in De Meyer (1989). When parts of the abdomen were cleared and stored in glycerine, colouring was often lost and particular features could not be seen; this is noted in descriptions where necessary. Only new species are extensively described; for others a short description is given.

TAXONOMY

Tomosvaryella Aczél, 1939: 22

Type species: *Pipunculus sylvaticus* Meigen, 1824, by original designation.

Synonym: *Alloneura* Rondani, 1846: 14. Type species: *Pipunculus flavipes* Meigen, 1824, by monotypy. Suppressed by I.C.Z.N. 1961: opinion 597.

Key to the Afrotropical species of *Tomosvaryella*

[Remark: *T. claripennis* (Loew) is excluded because no material of this species could be studied.]

1 Males 2
– Females 38

2 Hind trochanter armed, with 1 or 2 protuberances below 3
– Hind trochanter smooth, without any protuberances 20

3 Hind femur either with well-developed protuberance near base or distinctly thickened (in case of doubt, go to 7) 4
– Hind femur not thickened and without any protuberances, at most with 1 or 2 basal spines 7

4 Hind tibia distinctly curved with apex broadened; abdomen subshining black-brown, with brownish dusting 5

– Hind tibia only slightly undulating, apex not broadened; abdomen shining, without any obvious dusting 6

5 Hind trochanter with long rod-like process, with apically 3 short bristles (Fig. 30F) .... **subafricana** sp. n.

– Hind trochanter with elongate flattened process, without any bristles (Fig. 11F) . **crassifemorata** sp. n.

6 Hind femora thickened, without distinct process; hind trochanter with elongate keel-like protuberance (Fig. 33F) .... **torosa** Hardy

– Hind femora not thickened, with sharp tooth-like process; hind trochanter with 2 protuberances, basal rod-like and shorter apical tooth-like (Fig. 35F) .... **tridens** Hardy

7 Legs completely yellow, hind trochanters with large keel-like protuberance (Fig. 12F) .... **flavipes** sp. n.

– Legs with at least femora partly darkened 8

8 Hind tarsi flattened, basitarsus broader than tibia; hind trochanter with basal swelling bearing 2 or 3 short bristles (Fig. 27E) .... **setositora** Hardy

– Hind tarsi not flattened, basitarsus same width as tibia 9

9 Hind trochanter with 2 protuberances, basal one sharply pointed and bearing 2 spines, apical one roundish keel-like (Fig. 1) .... **africana** Hardy

– Hind trochanter with single protuberance 10

10 Hind trochanter with rod-like protuberance (Figs 7E, 28F & 29F) 11

– Hind trochanter with differently shaped protuberance 13

11 Abdomen dusted, without metallic appearance; ejaculatory duct with straight ductuli; epandrium not strongly constricted medially (Fig. 7A) .... **brachyscolops** Hardy

– Abdomen with metallic appearance; ejaculatory duct with ductuli slightly coiled; epandrium strongly constricted medially (Figs 28 & 29) 12

12 Surstyli highly asymmetrical (Fig. 28A); protuberance on hind trochanter with only few hairs apically .... **singula** Hardy

– Surstyli subsymmetrical, straight cylindrical shape (Fig. 29A); hind trochanter apically with cluster of short hairs resembling brush .... **singuloides** sp. n.

13 Membranous area on abdominal sternum 8 directed to right side; large broadened epandrium; surstyli highly asymmetrical with inner surstylus more elongate and slender than outer surstylus (Figs 31 & 32) 14

– Membranous area directed distally; epandrium smaller; surstyli symmetrical or subsymmetrical with both surstyli approximately the same length (Figs 16, 26 & 36) 15

14 Hind trochanter with large trapezoid process, covered apically with row of short hairs; in lateral view inner surstylus with distinct median protuberance (Fig. 31) **subvirescens** (Loew)

– Hind trochanter with more triangular process, apical hairs over shorter distance; in lateral view inner surstylus without distinct median protuberance, only slight thickening (Fig. 32) .... **tecta** sp. n.

15 Surstyli short and broad, in lateral view outer surstylus with large median lobe, inner surstylus with similar but less developed lobe; apical part of aedeagus with pilose appendage (Fig. 36) .... **vicina** (Becker)
– Surstyli more elongate, without distinct median lobes; apex of aedeagus usually simply pointed, without pilose appendage (Figs 16, 18 & 34) 16

16 Epandrium strongly constricted medially; surstyli in dorsal view with knob-like apices, in lateral view distinctly broadened basally (Fig. 34) .... **transvaalensis** sp. n.
– Epandrium not strongly constricted medially; surstyli not like above (Figs 16, 18 & 33) 17

17 Membranous area on abdominal sternum 8 narrow and elongate; surstyli symmetrical, with apices pointed (Fig. 33) .... **torosa** Hardy
– Membranous area larger (Figs 16, 18 & 26) 18

18 Abdominal sternum 8 with dorsal suture (Fig. 16D) .... **insulicola** sp. n.
– Abdominal sternum 8 without dorsal suture (Figs 18 & 26) 19

19 Surstyli short and broad (Fig. 26A) .... **ruwenzoriensis** sp. n.
– Surstyli long and slender (Fig. 18A) .... **mbuyensis** Hardy

20 Crossvein r-m positioned at basal third of discal cell ....**montana** sp. n.
– Crossvein r-m positioned at or near middle of discal cell 21

21 Thorax and abdomen with long, pale, conspicuous pilosity (hairs at least as long as third antennal segment) .... **comaousa** De Meyer
– Thorax and abdomen with pilosity shorter 22

22 Thorax and abdomen with metallic blue appearance, no dusting .... **caerulescens** sp. n.
– Thorax and abdomen at least partly dusted, if metallic then shining black 23

23 Abdomen very elongate; basitarsus of hind legs thickened .... **latitarsis** Hardy
– Not as above 24

24 Epandrium strongly constricted medially; surstyli broad in lateral view (Figs 15 & 22) 25
– Epandrium only slightly constricted medially; surstyli slender (Figs 3, 21 & 23) 26

25 Inner surstylus cleaver-like in lateral view, narrowed basally, broadened above; outer surstylus broadened along apical margin (Fig. 15) .... **incondita** Hardy
– Inner surstylus same width along entire length; outer surstylus broadened along entire length except at apical margin (Fig. 22) .... **parvicuspis** Hardy

26 Both surstyli with knob-like apices in dorsal view (Fig. 19A) .... **mesostena** Hardy
– Surstyli without knob-like apices in dorsal view, at most inner surstylus broadened apically 27

27 Inner surstylus with apex broadened in dorsal view (Figs 3, 13 & 21) 28
– Inner surstylus not broadened (Figs 6, 10 & 14) 31

28 Surstyli subsymmetrical, of same length (Fig. 21A); lateral fan completely reduced .... **oligoseta** sp. n.

– Inner surstylus distinctly longer than outer surstylus (Figs 2A, 3A & 13A) 29

29 Inner surstylus with apex broad and blunt in lateral view, outer surstylus broadened at base (Fig. 3) ....**angolensis** sp. n.

– Not as above 30

30 Outer surstylus with apex distinctly and abruptly curved downwards in lateral view (Fig. 2B) .... **ancylostyla** Hardy

– Outer surstylus apically only slightly curved in lateral view (Fig. 13B) .... **forchhammeri** sp. n.

31 Ejaculatory ductuli very long, much longer than surstyli, partly coiled (Fig. 23B) 32

– Ejaculatory ductuli shorter (Figs 6B, 10B & 14B) 34

32 Surstyli symmetrical (Fig. 23A) .... **propria** Hardy

– Surstyli not symmetrical (Figs 24 & 25) 33

33 Inner surstylus with pointed end (Fig. 24C) .... **spinigera** sp. n.

– Inner surstylus with elongate, spoon-like end (Fig. 25C) .... **singularis** sp. n.

34 Membranous area of sternum 8 very large, occupying more than half of width; surstyli with pointed processes in lateral view (Fig. 6) .... **brachybasis** sp. n.

– Membranous area smaller, occupying at most half entire width; surstyli different 35

35 Ejaculatory duct very short, not reaching base of surstyli (Fig. 14B) .... **gibbosa** Hardy

– Ejaculatory duct longer, reaching halfway along surstyli (Figs 4B, 5B & 10B) 36

36 Ejaculatory duct with small teeth over entire length of one ductulus (Fig. 10B); surstyli of same length ....

– Ejaculatory ductuli without any teeth, at most small cluster of teeth at base (Figs 4B & 5B); inner surstylus slightly longer 37

37 Ejaculatory duct with cluster of teeth at base of ductuli; surstyli not distinctly broadened at base; membranous area narrowed below (Fig. 5) **botswanae** sp. n.

– Ejaculatory duct without any teeth; surstyli broadened at base; membranous area narrowed above (Fig. 4) .... **apicalis** Hardy

38 Crossvein at basal fourth of discal cell; ovipositor as in Fig. 37D . **basalis** Hardy

– Crossvein near middle of discal cell 39

39 Thorax and abdomen with long pale pilosity, hairs at least as long as third antennal segment; ovipositor as in Fig. 37F .... **comaousa** De Meyer

– Pilosity shorter 40

40 Base of ovipositor dorsally with 1 or 2 distinct processes (Figs 37G & 37I) ... 41

– Base of ovipositor without any distinct processes (sometimes small thickening present, cf. with Figs 37F & 38J) 42

41 Ovipositor with piercer curved upwards, about as long as base (Fig. 37G) .... **congoana** Hardy

– Ovipositor with piercer curved downwards, much longer than base (Fig. 37I) ..... **insulicola** sp. n.

42 Ovipositor with piercer flattened laterally and distinctly S-curved (Fig. 38D) ..... **parvicuspis** Hardy

– Ovipositor with piercer at most slightly curved, not flattened 43

43 Ovipositor with piercer shorter than base, or at most as long as base (Figs 37A & 38C,F,I–L) 44

– Ovipositor with piercer much longer than base (Figs 37B,E,H & 38E,G) 49

44 Ovipositor with tip of piercer gradually tapered apically (Figs 38I,K) 45

– Ovipositor with tip of piercer broad and abruptly tapered apically (Figs 38F,J,L) 47

45 Ovipositor with base abruptly tapered towards thin piercer (Figs 37A & 38I) 46

– Ovipositor with base gradually tapered towards piercer (Fig. 38K) ... **tecta** sp. n.

46 Abdomen with conspicuous pilosity .... **subvirescens** (Loew) [According to Hardy (1961) females of *vicina* and *latitarsis* have an ovipositor similar to *subvirescens*. The former species could not be studied and no drawings are available of the ovipositor. They may key out here.]

– Abdomen without conspicuous pilosity, at most indistinct hairs .... **africana** Hardy

47 Ovipositor with tip of piercer tapered downwards (Fig. 38J) .... **sylvaticoides** (Lamb)

– Ovipositor with tip of piercer tapered upwards (Figs 38F,L) 48

48 Frons without median groove, upper half shining black, lower part silver-grey pubescent; smaller species (body length < 2,7 mm) .... **singula** Hardy

– Frons with median groove, mainly silver-grey pubescent, gradually diminishing but only shining black just in front of ocellar triangle; larger species (body length > 2,8 mm) .... **tridens** Hardy

49 Ovipositor with piercer curved distinctly downwards (Figs 37C,H) 50

– Piercer straight or curved upwards (Figs 37B,E & 38C) 52

50 Fore femora without basal spines .... **mbuyensis** Hardy

– Fore femora with 1 or 2 strong basal spines 51

51 Abdominal terga mainly shining black, narrowly brownish dusted along lateral margins; ovipositor with base at different angle to piercer (Fig. 37H) .... **forchhammeri** sp. n.

– Abdominal terga subshining black-brown, also brownish dusted medially; ovipositor with base along direct line with piercer (Fig. 37C) ..... **apicalis** Hardy

52 Ovipositor with piercer curved upwards (Fig. 38C); lateral fan completely reduced .... **oligoseta** sp. n.

– Ovipositor with piercer straight (Figs 37B,E) 53

53 Frons with upper half shining black, lower half silver-grey pubescent 54

– Frons mainly silver-grey pubescent, shining black only in front of ocellar triangle 56

54 Ovipositor with piercer 1,5 times as long as base, base long and broad (Fig. 38B); mesonotum shining black .... **mesostena** Hardy

– Ovipositor with piercer at least twice as long as base, base short (Figs 38E,G); mesonotum partly dusted 55

55 Third antennal segment pale brown, acuminate; base of ovipositor globose below (Fig. 38E); abdominal terga weakly subshining black-brown, mainly brownish or greyish dusted .... **propria** Hardy
[Females of *spinigera* and *singularis* cannot be differentiated from *propria* and will also key out here.]

– Third antennal segment yellow, filiform; base of ovipositor more flattened below (Fig. 38G); abdomen mainly shining black medially, except for second tergum which is weakly brownish dusted .... **speciosa** Hardy

56 Femora distinctly broadened in apical half .... ? **subafricana** sp. n.
[Association of female with male uncertain; see below under description.]

– Femora of normal shape 57

57 Ovipositor with piercer long and thin in contrast to short base (Fig. 37E) .... **brachybasis** sp. n.

– Ovipositor with piercer more robust, especially basally (Fig. 37B) .... **anomala** Hardy

Tomosvaryella africana Hardy, 1949

Figs 1 & 37A

Tomosvaryella africana Hardy, 1949: 66.

Body length 2,4–3,0 mm; wing length 2,3–2,9 mm.

Male:

Head: Third antennal segment acute, pale brownish with whitish fringe. Frons, eyes touching for length equal to ocellar triangle; lower part silver-grey pubescent with weak golden shine; upper part shining black. Occiput with upper third black, weakly greyish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted, anterior margin greyish; dorsocentral rows with short pale hairs, anteriorly somewhat longer.

Legs: Brownish; knees yellow with basal third of tibiae yellow. Hind trochanter with 2 protuberances (Fig. 1F), basal one sharply pointed with 2 spines, apical one roundish and keel-like; sometimes basal protuberance more elongate. Fore femora basally with 2 short indistinct ventral spines.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Terga subshining black-brown; sparsely brownish dusted, along lateral margins slightly greyish; pilosity indistinct and darkish. Terminalia as in Fig. 1.

Female: As male except for the following characters. Third antennal segment acuminate. Frons silver-grey pubescent, in front of ocellar triangle weakly subshining. Fourth costal section only slightly longer than third costal section. Body more greyish dusted. Fore femora basally with 2 distinct ventral spines. Terminalia as in Fig. 37A.

Material examined: Holotype ♂, NAMIBIA: Okahandja, 19–29.xii.1927, R. E. Turner (BMNH). Allotype: ♀, same date and locality as holotype (BMNH). Paratypes: SOUTH AFRICA: *Cape Province*, 1 ♂, Matjesfontein, 7–13.xi.1928; 1 ♀, Mossel Bay, v.1932; 1 ♀, ii.1922 (BMNH). Additional material: 17 specimens from Botswana, South Africa and Namibia (IMS, BMNH, NMSA, SANC).

Remarks: The protuberances of the male hind trochanters show some variation in the length of the basal, and in the shape of the apical protuberance. Hardy (1961: 155) also gives a drawing of a specimen from Zaïre which differs from the holotype by having the apical protuberance sharply pointed. Sometimes the apical protuberance is indistinct.

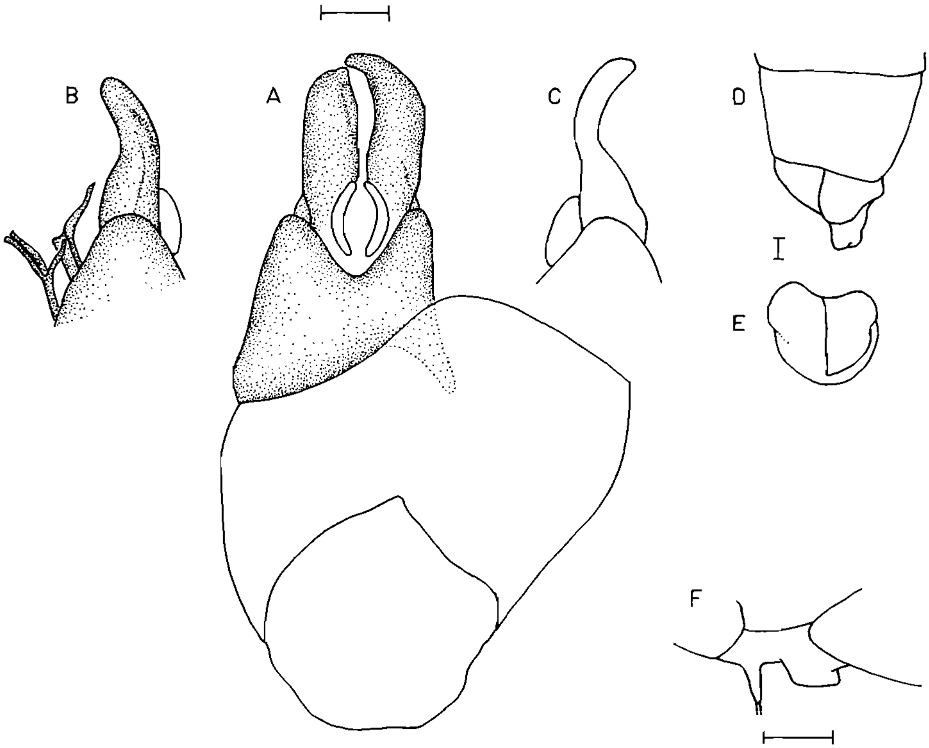

Fig. 1. *Tomosvaryella africana* Hardy, 1949. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Tomosvaryella ancylostyla Hardy, 1961

Fig. 2

Tomosvaryella ancylostyla Hardy, 1961: 156.

Body length 2,2–2,4 mm; wing length 3,2–3,5 mm.

Male:

Head: Missing in holotype; according to other material: third antennal segment short-acuminate; dark brown with anterior margin paler. Frons, eyes touching for distance subequal to ocellar triangle (according to original description narrowly separated by distance half size of ommatidium), silver-grey pubescent; face subshining black. Occiput with upper third shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown with bronze metallic appearance, punctate, anterior margin greyish dusted; dorsocentral rows with very short dark hairs.

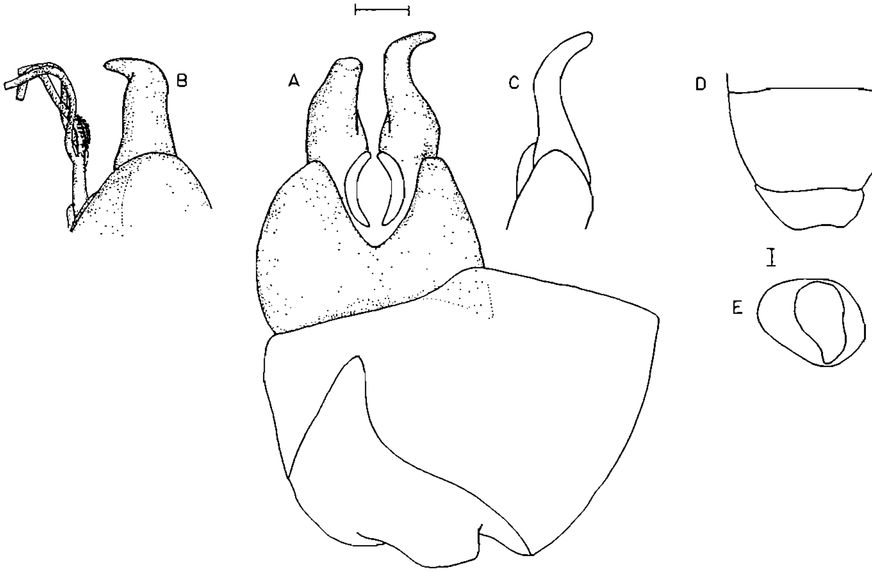

Fig. 2. *Tomosvaryella ancylostyla* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Legs: Dark; knees yellow with basal fourth to fifth of tibiae yellow.

Wing: Fourth costal section 3,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Terga subshining black, with metallic and punctate appearance; with conspicuous short dark pilosity. Terminalia as in Fig. 2.

Female: Unknown.

Material examined: Holotype ♂, ZAÏRE: Parc National de Garamba, 'Pp.K.52g', 16.x.1951, H. De Saeger (MRAC). Paratype: ZAÏRE: 1 ♂, Parc National de Garamba, '11/gd/4', 27.xii.1951, De Saeger (MRAC). Additional material: ZAÏRE: 1 ♂, Mutwanga, 23.ix.1957, Ross & Leech, 1200 m (CASC); 1 ♂, Parc National Albert, Ruwenzori massif, Bomboka near Kyandolire, 15.x.1952, Vanschuytbroeck & Kekenbosch, 1650 m (MRAC).

Tomosvaryella angolensis sp. n.

Fig. 3

Body length 3,7 mm; wing length 3,8 mm.

Diagnosis: Hind trochanters smooth; abdominal terga shining; abdominal sternum 8 without dorsal suture; surstyli asymmetrical, inner surstylus longer and broadened distally.

Male:

Head: Third antennal segment acuminate, pale brown. Second antennal segment dark brown. Frons, eyes touching for 1,5 times length of ocellar triangle; lower part

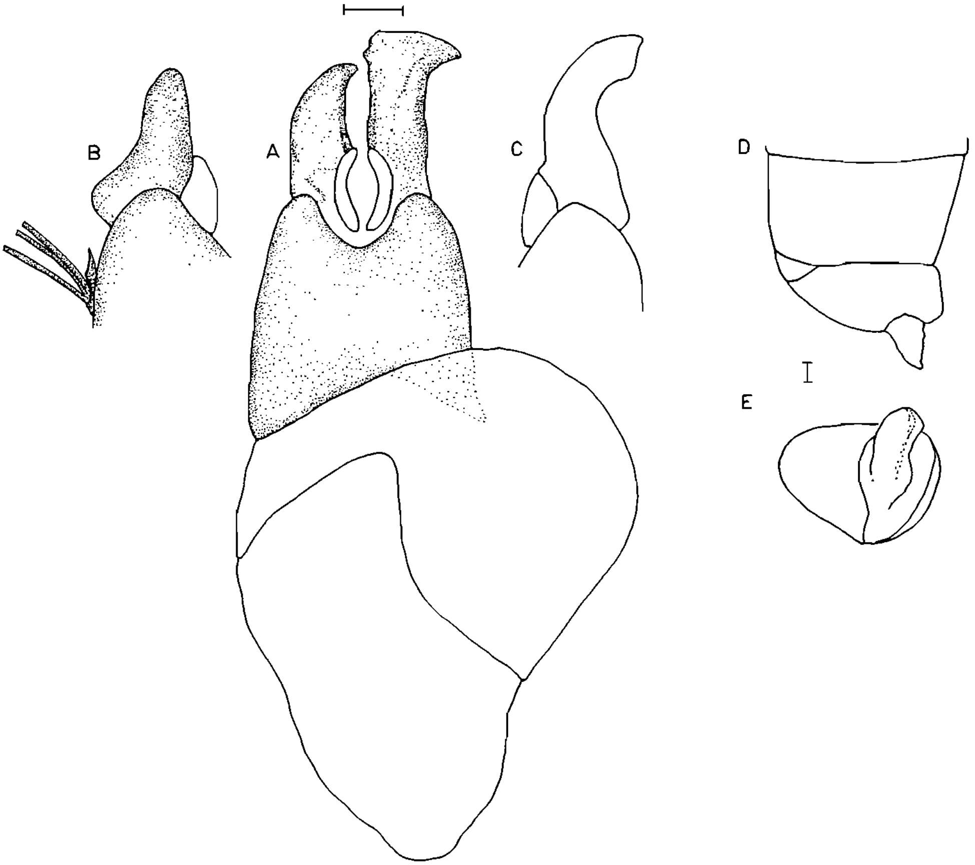

Fig. 3. *Tomosvaryella angolensis* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

occupying two-fifths entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum mainly subshining black-brown, weakly brownish dusted; dorsocentral rows indistinct except differentiated anteriorly as short dark hairs. Scutellum same colour and dusting as centre of mesonotum, except more polished. Halteres brown, stems yellow.

Legs: Dark; knees narrowly yellow. Hind trochanter smooth. Tarsal segments brownish.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned slightly before middle of discal cell.

Abdomen: Lateral fan almost completely reduced, with 1–2 short dark hairs. Terga shining black; with short dark pilosity. Sternum 8 longer than half length of tergum 5; subshining black-brown, slightly greyish dusted. Sterna dark brown. Membranous area occupying half of sternum 8. Terminalia (Fig. 3) with surstyli asymmetrical, inner surstylus longer and broadened distally; ejaculatory duct trifid, tubiform; apex of aedeagus simply pointed.

Female: Unknown.

Material examined: Holotype ♂, ANGOLA: 2 mls N. of Hengue, 29.v.1958, Ross & Leech (CASC, Nr. 17023).

Etymology: The species name refers to the type locality, Angola.

Tomosvaryella anomala Hardy, 1949

Fig. 37B

Tomosvaryella anomala Hardy, 1949: 67.

Body length 2,8 mm; wing length 3,1 mm.

Female:

Head: Third antennal segment long-acuminate; pale brownish. Frons, silver-grey pubescent; in front of ocellar triangle more shining black. Occiput with upper third shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black, anterior margin greyish dusted; dorsocentral rows with moderately long, pale hairs. Scutellum with long pale hairs.

Legs: Dark; trochanters pale brownish; knees yellow with basal third to two-fifths of tibiae yellow.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: Terga mainly shining black; sparsely brownish dusted, lateral margins narrowly greyish dusted; with sparse but conspicuous, moderately long, pale pilosity. Terminalia as in Fig. 37B.

Male: Unknown.

Material examined: Holotype ♀, SOUTH AFRICA: E. Cape Province, Katberg (4,000 ft), xii.1932, R.E. Turner (BMNH).

Tomosvaryella apicalis Hardy, 1949

Figs 4 & 37C

Tomosvaryella apicalis Hardy, 1949: 68.

Body length 2,5–2,9 mm; wing length 2,6–3,0 mm.

Male:

Head: Third antennal segment acuminate, dark brown, slightly greyish pubescent. Frons, eyes touching for distance 1,5 times length of ocellar triangle; lower part with silver-grey or golden pubescence; upper part shining black, sparsely greyish pubescent. Occiput subshining black; weakly brownish pubescent; lower part silver-grey pubescent.

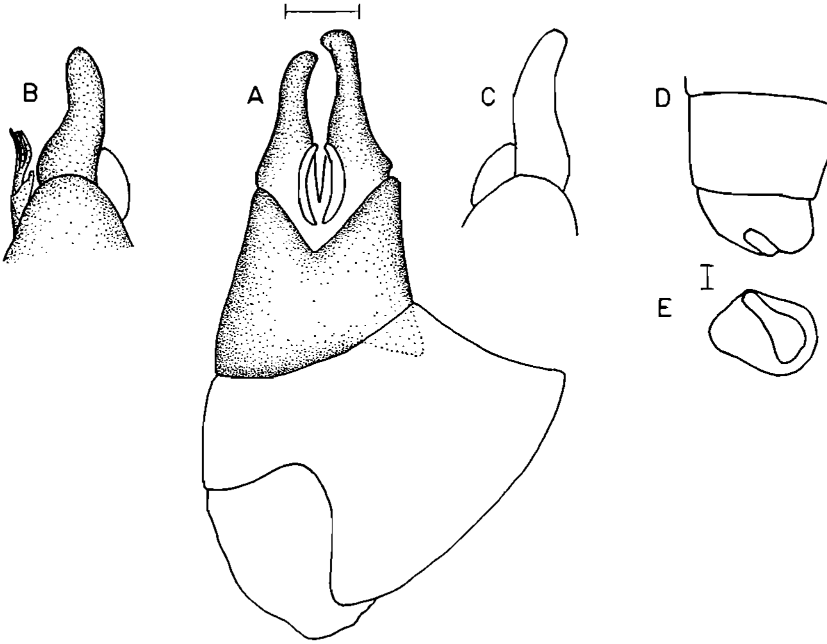

Fig. 4. *Tomosvaryella apicalis* Hardy, 1949. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Thorax: Humeri yellow. Mesonotum subshining black-brown, sparsely brownish dusted; dorsocentral rows with moderately long dark hairs, especially anteriorly.

Legs: Dark; knees narrowly yellow.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m postioned at middle of discal cell.

Abdomen: Terga subshining black-brown; brownish dusted; with short dark pilosity, not distinct on first 2 terga. Terminalia as in Fig. 4.

Female: As in male except for the following characters. Frons shining black for distance twice length of ocellar triangle. Fore femora basally with 2 ventral spines. Terminalia as in Fig. 37C.

Material examined: Holotype ♂, SOUTH AFRICA: Mossel Bay, Cape Province, ii.1922, R. E. Turner (BMNH). Additional material: SOUTH AFRICA: *Cape Province*: 1 ♂, Mossel Bay, 14.x.1938; 1 ♂, 20.x.1938; 1 ♂, 1.xi.1938; 2 ♀, 11.xi.1938; 1 ♂ 2 ♀, 10.xii.1938; 1 ♂, 11.xii.1938; 1 ♂ 1 ♀, 24.xii.1938 (all collected Turner, BMNH); 1 ♀, Port Elisabeth district, Sardinia bay, coastal dunes, 14.iii.1974, Stuckenberg & Irwin (NMSA). *Natal*: 1 ♂, Pietermaritzburg, Ottos Bluff, 6.ii.1972, Irwin; 1 ♂, Giants Castle Game Res., Injasuti area, 5–11.xii.1983, Londt; 1 ♀, Ashburton, 15km SE. Pietermaritzburg, 19–25.ii.1977, Londt (all NMSA).

Tomosvaryella basalis Hardy, 1950

Fig. 37D

Tomosvaryella basalis Hardy, 1950: 43.

Body length 2,3 mm; wing length 2,7 mm.

Female:

Head: Missing in holotype; according to original description: third antennal segment long-acuminate; dark brown. Frons mainly shining black except small area above antennae pubescent. Occiput shining black except lower half brownish pubescent.

Thorax: Humeri dark, same colour as centre of mesonotum. Mesonotum shining black-brown, weakly brownish dusted; dorsocentral rows with short pale hairs. Halteres dark brown.

Legs: Completely dark brown.

Wing: Missing in holotype; according to original description: third costal section one-half as long as fourth costal section; crossvein r-m positioned at basal fourth of discal cell.

Abdomen: Terga subshining black-brown; weakly brown dusted. Terminalia as in Fig. 37D.

Male: Unknown.

Material examined: Holotype ♀, ZAÏRE: Kivu, Ngesho, 3–6.iv.1934, de Witte, 2000 m (MRAC, head and wings missing, poor condition). Paratype: ZAÏRE: 1 ♀, Kivu, Rutshuru, 1–6.vi.1935, de Witte, 1285 m (MRAC, also poor condition, piercer, head and most of wings missing).

Remarks: Because of the poor state of the type material, the relationship of this species to other Afrotropical *Tomosvaryella* species is unclear. I am not even sure that it actually belongs to this genus, since its general appearance and wing venation are unlike most other congeners.

Tomosvaryella botswanae sp. n.

Fig. 5

Body length 2,8–3,1 mm; wing length 2,7–2,9 mm.

Diagnosis: Male eyes not touching; hind trochanters smooth; abdominal terga shining with only lateral margins lightly dusted; abdominal sternum 8 without dorsal suture, membranous area constricted in upper part; surstyli subsymmetrical with inner surstylus slightly longer; ejaculatory ductuli short.

Male:

Head: Third antennal segment long-acuminate, yellow-brown with whitish tip. Second antennal segment dark brown. Frons, eyes not touching, separated by width equal to 2 ommatidia; lower part silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper third shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum mainly subshining black-brown, slightly greyish brown dusted; dorsocentral rows with short dark hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres pale yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow. Tarsal segments yellowish brown. Trochanters smooth.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with 5–6 dark bristly hairs. Terga shining black-brown; lateral margins lightly brownish dusted; with short but conspicuous dark pilosity. Sternum 8 paler brown, half as long as tergum 5. Sterna dark brown. Terminalia (Fig. 5) with surstyli subsymmetrical and in lateral view base broadened; ejaculatory duct short and trifid; apex of aedeagus simply pointed.

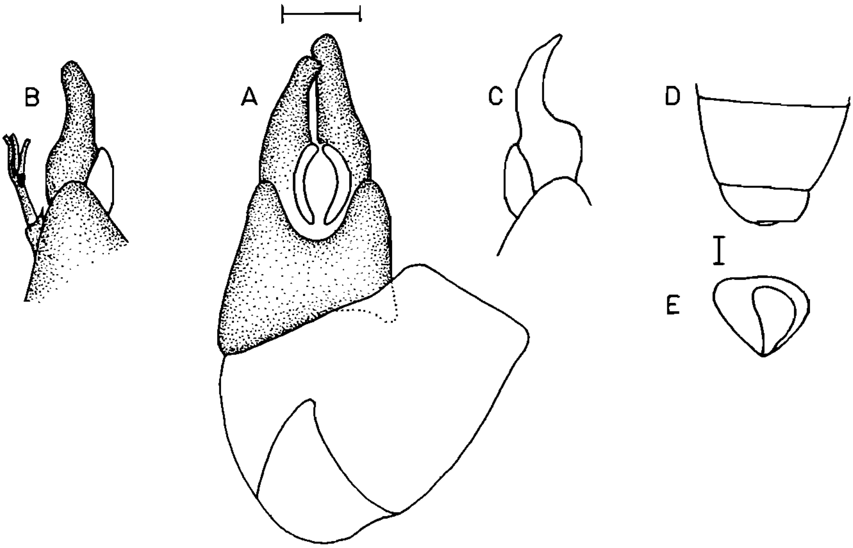

Fig. 5. *Tomosvaryella botswanae* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Female: Unknown.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, iv.1986, Forchhammer (ISNB). Paratypes: same locality as holotype, 4 ♂, iv.1986; 1 ♂, iii.1986 (all in ISNB, IMS).

Etymology: The name refers to the type locality, Botswana.

Tomosvaryella brachybasis sp. n.

Figs 6 & 37E

Body length 2,0–2,4 mm; wing length 2,2–2,4 mm.

Diagnosis: Hind trochanters smooth; abdominal terga subshining black-brown with light brownish dusting; abdominal sternum 8 without dorsal suture, membranous area constricted in lower part; surstyli subsymmetrical with inner surstylus slightly longer; ejaculatory ductuli short and trifid with small cluster of teeth at base of one ductulus; ovipositor with very short base and elongate thin piercer.

Male:

Head: Third antennal segment short-acuminate, brown. Second antennal segment black-brown. Frons, eyes touching for distance equal to ocellar triangle; lower part occupying half of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper third subshining black, lightly brownish pubescent; lower part more densely silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, lightly brownish dusted; dorsocentral rows indistinct, only anterior few differentiated as very short hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres whitish.

Legs: Dark; knees yellow with basal fourth of tibiae yellow; apices of tibiae also narrowly yellow. Tarsal segments yellow, apical tarsal segment dark. Trochanters smooth.

Wing: Fourth costal section 2,5 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with few short dark hairs. Terga subshining black-brown; lightly brownish dusted; with inconspicuous pilosity. Sternum 8 less than half as long as tergum 5. Sterna pale brown. Membranous area roundish, occupying more than half of sternum 8. Terminalia (Fig. 6) with surstyli subsymmetrical and in lateral view distally hooked; ejaculatory duct short and trifid, tubiform; apex of aedeagus simply pointed.

Female: As male except for the following characters. Third antennal segment paler. Frons silver-grey pubescent, upper part (2,5 times length of ocellar triangle) gradually less pubescence. Fourth costal section slightly shorter. Terminalia (Fig. 37E) with ovipositor base very short; piercer straight, very long and slender.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, viii.1986, Forchhammer (ISNB). Allotype: ♀, same date and locality as holotype (ISNB). Paratypes: same locality as holotype, 4 ♂ 1 ♀, i.1986; 1 ♂ 2 ♀, iii.1986; 1 ♀, iv.1986; 1 ♀, vi.1986; 5 ♀, vii.1986; 3 ♀, viii.1986; 1 ♀, iii.1989; 1 ♂ 1 ♀, viii.1989; 1 ♀, ix.1989, Forchhammer (paratypes in ISNB, IMS, NMSA). Additional material (excluded from type series): BOTSWANA: 1 ♂ 2 ♀, Moeng College, 6–24.ix.1986; 2 ♀, Mahalapye, Madiba Secondary School, Science garden, 26.ii–6.iii.1986; 1 ♂ 2 ♀, Mochudi, Deborah Retief Memorial Hospital, 22.v–9.vi.1985, De Meyer (ISNB). NAMIBIA: 1 ♂, Windhoek, Regenstein Mt, 8.ii.1972 (BMNH). SOUTH AFRICA: *Cape Province*: 1 ♂, Karoo National Park, 15 km N. Beaufort West, 12.xi.1986, Londt & Quickelberge (NMSA).

Etymology: The species name 'brachybasis' means short base and refers to the short base of the female ovipositor, in strong contrast to the elongate piercer.

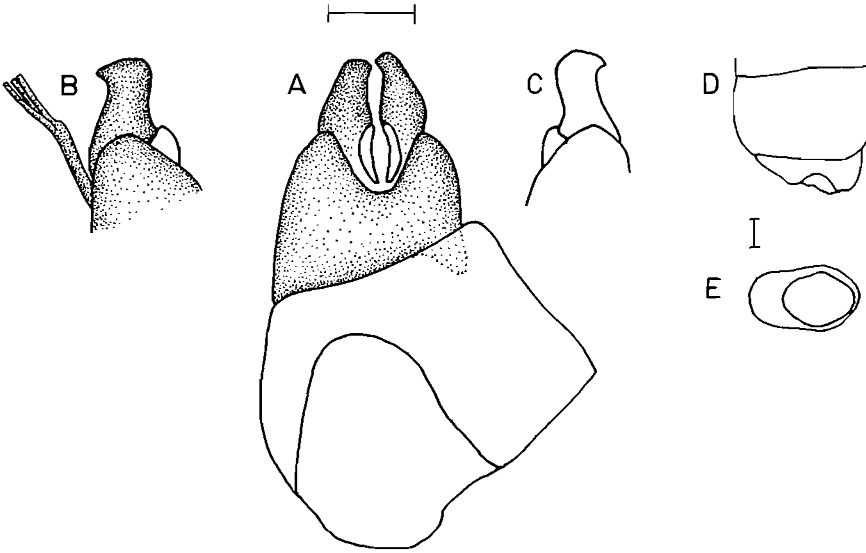

Fig. 6. *Tomosvaryella brachybasis* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Tomosvaryella brachyscolops Hardy, 1961

Fig. 7

Tomosvaryella brachyscolops Hardy, 1961: 157.

Body length 2,9 mm; wing length 3,4 mm.

Male:

Head: Third antennal segment acute; brown. Frons, eyes touching for 1,5 times the length of ocellar triangle; lower part brownish grey pubescent; upper part shining black. Occiput with upper third subshining black, weakly brownish dusted; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum weakly subshining black-brown, brownish dusted; dorsocentral rows hardly distinguishable. Halteres yellow, stems darker.

Legs: Dark; knees yellow, with basal fourth of tibiae yellow. Hind trochanter with one elongate rod-like protuberance, and apically with 2 short spines (Fig. 7E).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned beyond middle of discal cell.

Abdomen: Tergum 2 subshining black-brown; brownish dusted; others missing; no distinct pilosity. Terminalia as in Fig. 7.

Female: Unknown.

Material examined: Holotype ♂, ZAÏRE: Parc National Garamba, 'II/fd/15' 22.ix.1951, De Saeger (MRAC, poor condition). Paratype: ZAÏRE: 1 ♂, Parc National Garamba, 'II/fd/7', 5.v.1952, De Saeger (MRAC).

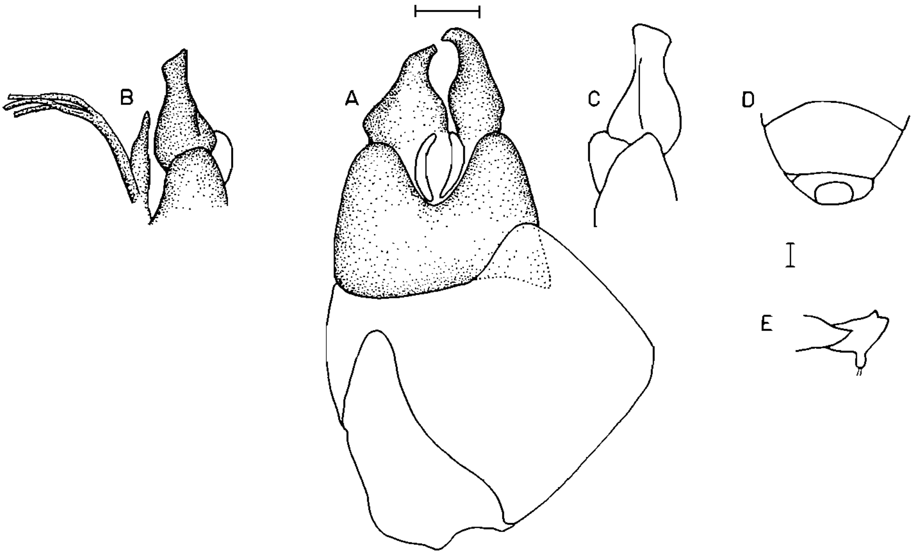

Fig. 7. *Tomosvaryella brachyscolops* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male hind trochanter, frontal view. Scale = 0,1 mm.

Tomosvaryella caerulescens sp. n.

Fig. 8

Body length 3,0 mm; wing length 3,2 mm.

Diagnosis: Hind trochanters smooth; dark blue metallic species, abdominal terga without any obvious dusting; abdominal sternum 8 without dorsal suture; surstyli subsymmetrical, curved downwards; inner surstylus broadened apically.

Male:

Head: Third antennal segment long-acuminate, pale yellowish white. Second antennal segment black-brown. Frons, eyes touching for 1,5 times the length of ocellar triangle; lower part occupying one-third of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper third shining black, posteriorly with weak and dark pubescence; lower part silver-grey pubescent.

Thorax: Humeri whitish. Mesonotum shining black, dark blue metallic; dorsocentral rows with moderately long dark hairs. Scutellum same colour and dusting as centre of mesonotum, with few moderately long dark hairs at apical margin. Halteres whitish.

Legs: Dark; knees yellow with basal fourth to third of tibiae whitish. Tarsal segments and hind trochanter yellowish brown.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at basal third of discal cell.

Abdomen: Lateral fan well developed with numerous moderately long dark hairs. Terga shining black, with dark blue metallic appearance; inconspicuous darkish pilosity. Sternum 8 almost as long as tergum 5; shining black, sparsely brownish dusted below. Sterna dark brown. Membranous area occupying half of sternum 8. Terminalia (Fig. 8) with surstyli subsymmetrical, curved downwards; inner surstylus broadened apically. Aedeagus apex pointed, elongate. Ejaculatory duct trifid.

Female: Unknown.

Material examined: Holotype ♂, CAMEROON: Rt.N4, 120 km NW. Yaoundé, 5.xi.1987, Freidberg (TAUI).

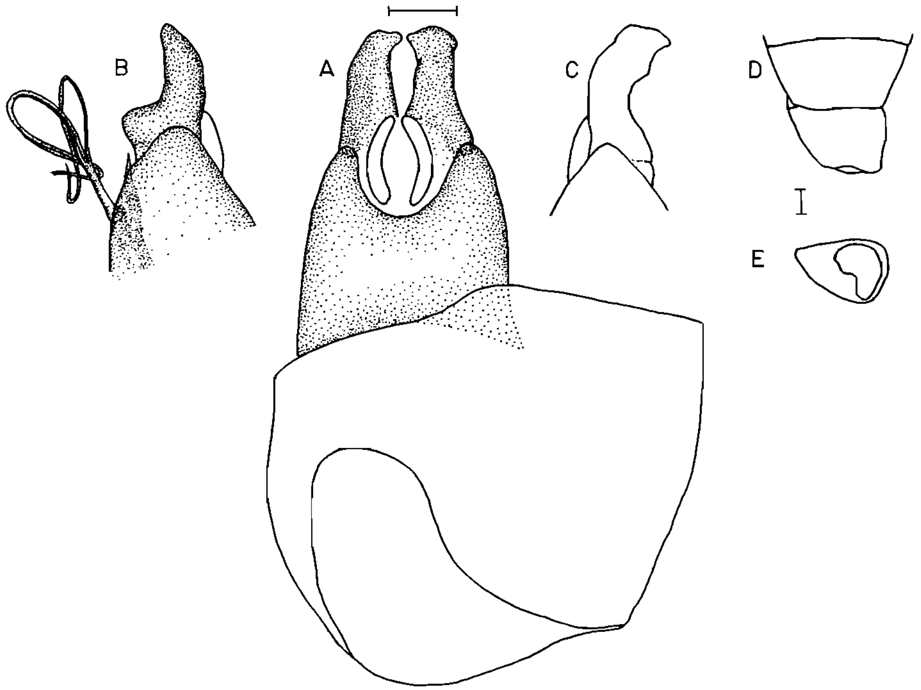

Fig. 8. *Tomosvaryella caerulescens* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Etymology: The species name 'caerulescens' refers to the blue metallic appearance of the thorax and abdomen.

Remarks: A second male from Cameroon in TAUI (Rt.N9, 20 km E. Sangamelima, 7.xi.1987, Fini Kaplan) is also differentiated by the conspicuous blue metallic colour of the thorax and abdomen. It differs from *T. caerulescens* by having conspicuous long dark pilosity on the thorax and abdomen (similar to *T. comaousa*). The surstyli are also different, but partly damaged (outer surstylus largely missing) and resemble *T. forchhammeri*. Because of the damaged male genitalia, I prefer not to describe this species until more material becomes available.

Tomosvaryella claripennis (Loew, 1858)

Pipunculus claripennis Loew, 1858: 375.

Holotype ♀, SOUTH AFRICA: 'Caffraria' (not examined).

Hardy (1949) mentions that the type is probably in the Berlin Zoological Museum. Schumann (*pers. comm.*) states however that the specimen is not in the collections of this museum, so the whereabouts of the type are unknown. The original description by Loew and subsequent translation by Hardy (1949) are insufficient to place or recognise this species: third antennal segment long-acuminate; reddish yellow with whitish shine. Body subshining. Legs black with apices of femora and bases of tarsi yellow. Posterior margin of first abdominal segment white.

Tomosvaryella comaousa De Meyer, 1990*b*

Figs 9 & 37F

Tomosvaryella comaousa De Meyer, 1990*b*: 88.

Body length 3,2–3,3 mm; wing length 2,9 mm.

Male:

Head: Third antennal segment long-acuminate, yellowish brown with whitish fringe anteriorly. Frons, eyes touching for distance equal to ocellar triangle; lower part silver-grey pubescent; upper part shining black. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black, only anterior margin brownish dusted; dorsocentral rows with very long pale hairs.

Legs: Dark; knees yellow with at most basal fifth of tibiae yellow. Hind legs missing in allotype. Trochanters smooth in TAUI male.

Wing: Fourth costal section slightly longer than third costal section. Crossvein r-m positioned just beyond middle of discal cell.

Abdomen: Terga shining black; no dusting; with conspicuous and very long pale pilosity. Terminalia as in Fig. 9.

Female: As male except for the following characters. Frons broadened in the middle; silver-grey pubescent below, subshining black on upper part for twice the length of ocellar triangle. Pilosity more conspicuous. Wing with fourth costal section about twice as long as third section. Fore femora ventrally with 2 basal spines, mid femora with 1 basal spine. Terminalia as in Fig. 37F.

Material examined: Holotype ♀, ETHIOPIA: Arusi Province, Digala, Mount Chillalo (approx. 2900 m), 26.xi.1926, H. Scott (BMNH). Allotype: ♂, same date and locality as holotype (BMNH). Paratype: 1 ♀, same date and locality as holotype (ISNB). Additional material: ETHIOPIA: 1 ♂, Managesh forest, 30m km NW. Addis Ababa, 1.i.1972, Freidberg (TAUI).

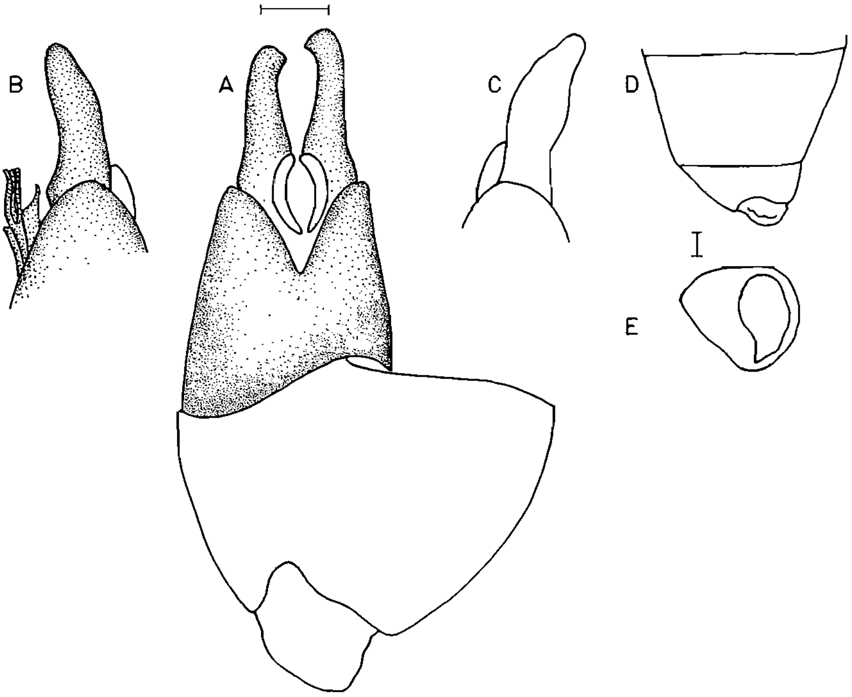

Fig. 9. *Tomosvaryella comaousa* De Meyer, 1990*b*. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Tomosvaryella congoana Hardy, 1950

Figs 10 & 37G

Tomosvaryella congoana Hardy, 1950: 45.

Body length 3,5–3,9 mm; wing length 3,8–4,3 mm.

Male:

Head: Third antennal segment acuminate; dark brown with whitish fringe apically. Frons, eyes touching for 1,5–2,0 times length of ocellar triangle; lower part silver-grey pubescent; upper part shining black. Occiput with upper third metallic (similar to centre of mesonotum); lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum weakly subshining, bronze metallic, brownish dusted; dorsocentral rows hardly distinguishable with short dark hairs.

Legs: Dark; knees yellow with basal two-fifths of tibiae yellow.

Wing: Fourth costal section 3,0–4,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Terga weakly subshining, bronze metallic; brownish dusted, tergum 5 with broad silver-grey spot along lateral margins, tergum 4 with smaller spot; with very short, dark pilosity. Terminalia as in Fig. 10.

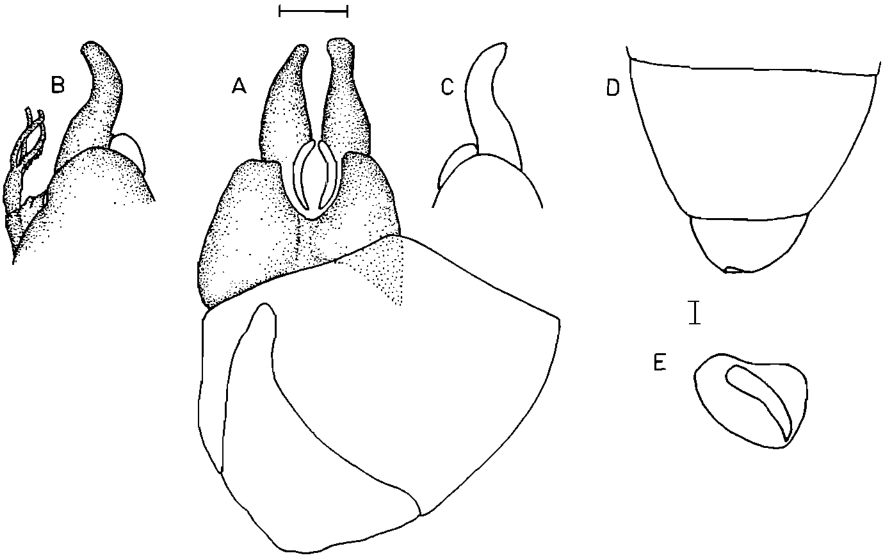

Fig. 10. *Tomosvaryella congoana* Hardy, 1950. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Female: As male except for the following characters. Third antennal segment pale brown. Frons shining for twice the length of ocellar triangle. Mesonotum more greyish dusted. Abdomen with silver-grey spots along lateral margins of terga 3–6. Terminalia as in Fig. 37G. Base with 2 tubercles dorsally (Hardy 1961 mentions one tubercle).

Material examined: Holotype ♂, ZAÏRE: Katanda, 30.xi.1934, 950 m (lost, pin with label in MRAC). Paratype: ZAÏRE: 1 ♂, Parc National Albert, Ndeko, près Rwindi, 27.xi.1934, de Witte, 1082 m (MRAC) (head missing). Additional material: 29 specimens from the Comoros Archipelago, South Africa, Zaïre and Zambia (MRAC, NMSA, SANC).

Remarks: Since the holotype is missing, the species identity is based on the paratype in MRAC. The original description seems to concur with available material, although its illustrations of genitalia are inadequate. The drawing in Hardy (1961) is slightly different from the genitalia of the paratype or material from South Africa. It is not clear whether this drawing is based on the holotype or on subsequent material mentioned by Hardy (1961) from the Parc National de la Garamba (the holotype is from Parc National Albert).

Tomosvaryella crassifemorata sp. n.

Fig. 11

Body length 2,6 mm; wing length 2,4 mm.

Diagnosis: Hind trochanters of male with elongate flattened process, hind femora and tibiae distinctly curved and broadened; abdominal terga subshining black-brown with brownish dusting; abdominal sternum 8 with dorsal suture; surstyli subsymmetrical; one ejaculatory ductulus with 2 large tooth-like appendages.

Male:

Head: Third antennal segment short-acuminate; yellow-brown. Second antennal segment dark brown. Frons, eyes touching for length twice that of ocellar triangle; lower part occupying half of entire length, dull and dark; upper part shining black. Face silver-grey pubescent. Occiput with upper part brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted, more

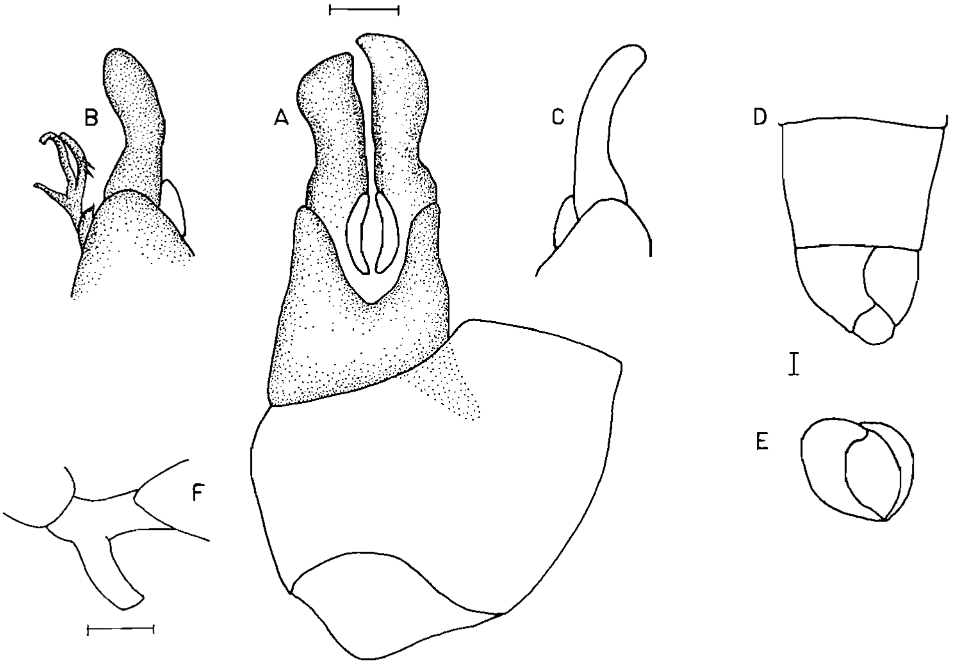

Fig. 11. *Tomosvaryella crassifemorata* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

greyish near humeri; dorsocentral rows with short darkish hairs, longer anteriorly. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow. Tarsal segments dark. Hind femora curved and distinctly broadened especially in apical half, hind tibia abruptly bent in middle with apex distinctly broadened. Hind trochanter with elongate flattened process, without bristles, hind femora basoventrally with triangular protuberance (Fig. 11F).

Wing: Fourth costal section 2,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with several long pale hairs. Terga subshining black-brown; brownish dusted, more greyish along lateral margins; with distinct but inconspicuous pilosity. Sternum 8 longer than half the length of tergum 5; with suture dorsally. Sternum 4 with fold. Sterna dark brown. Terminalia (Fig. 11) with surstyli subsymmetrical, apices pointing inwards; ejaculatory duct trifid, 1 ductulus with 2 large tooth-like appendages.

Female: Unknown.

Material examined: Holotype ♂, KENYA: Kwale District, Diani Beach, 4.i.1970, Irwin & Ross (CASC, Nr. 17024).

Etymology: The name 'crassifemorata' refers to the thickened femora in this species.

Tomosvaryella flavipes sp. n.

Fig. 12

Body length 3,0 mm; wing length 3,1 mm.

Diagnosis: Male hind trochanters with large keel-like protuberance; legs completely yellow except for apical tarsal segment; abdominal terga shining black, lateral margins sparsely dusted; abdominal sternum 8 without dorsal suture; surstyli subsymmetrical and elongate; one ejaculatory ductulus with 2 tooth-like appendages.

Male:

Head: Third antennal segment long-acuminate, pale yellow. Second antennal segment yellow. Frons, eyes touching for twice length of ocellar triangle; lower part occupying half of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput completely silver-grey pubescent, upper part less dense.

Thorax: Humeri whitish yellow. Mesonotum shining black-brown, sparsely brownish dusted; dorsocentral rows with short pale hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Completely yellow except apical tarsal segment dark. Hind trochanter with large keel-like protuberance (Fig. 12F).

Wing: Fourth costal section 3,0 times as long as third costal section. Crossvein r-m positioned at basal third of discal cell.

Abdomen: Lateral fan with several short dark hairs. Terga shining black; lateral margins sparsely brownish dusted; with conspicuous moderately long darkish pilosity. Sternum 8 less than half the length of tergum 5; brownish dusted. Sternum 4 without fold. Sterna pale brown. Membranous area irregularly shaped. Terminalia (Fig. 12) with surstyli subsymmetrical, elongate; ejaculatory duct short and trifid, one ductulus with 2 tooth-like appendages.

Female: Unknown.

Material examined: Holotype ♂, MADAGASCAR: Behara, iv.1937, Seyrig (MRAC).

Etymology: The name 'flavipes' refers to the yellow legs of this species, unique in Afrotropical *Tomosvaryella*.

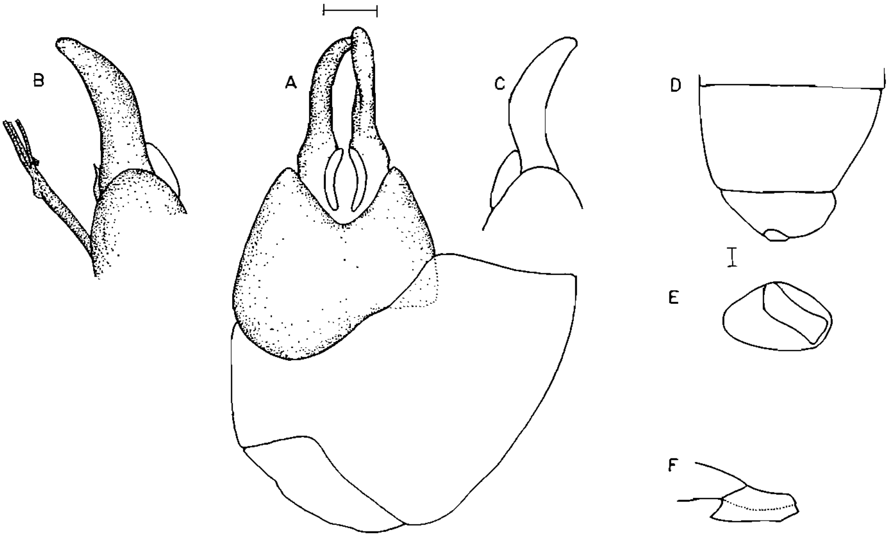

Fig. 12. *Tomosvaryella flavipes* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Tomosvaryella forchhammeri sp. n.

Figs 13 & 37H

Body length 3,0–3,3 mm; wing length 2,9–3,2 mm.

Diagnosis: Trochanters smooth; abdominal terga shining black, lateral margins narrowly brownish dusted; abdominal sternum 8 without dorsal suture; surstyli asymmetrical with inner surstylus longer and broadened apically, in lateral view strongly curved downwards; ovipositor with piercer about twice as long as base and curved downwards.

Male:

Head: Third antennal segment filiform; yellowish brown. Second antennal segment dark brown. Frons, eyes touching for twice the length of ocellar triangle; lower part occupying one-third of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black-brown, sparsely brownish dusted; dorsocentral rows indistinct. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Brown; knees narrowly yellow, with basal fourth of tibiae yellow. Tarsal segments pale brown. Trochanter smooth.

Wing: Fourth costal section 2,0 times as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: Lateral fan reduced, with 2–3 short black hairs. Terga shining black; lateral margins narrowly brownish dusted; pilosity almost completely absent. Sternum 8 half as long as tergum 5, brownish dusted. Sternum 4 with fold. Sterna dark brown. Membranous area at right side of sternum, rounded above, pointed below. Terminalia (Fig. 13) asymmetrical, inner surstylus longer and apically broadened, in lateral view strongly curved downwards.

Female: As male except for the following characters. Frons with upper part shining black for twice the length of ocellar triangle; lower part silver-grey pubescent. Mesonotum and abdominal terga weakly greyish dusted. Fore femora ventrally with

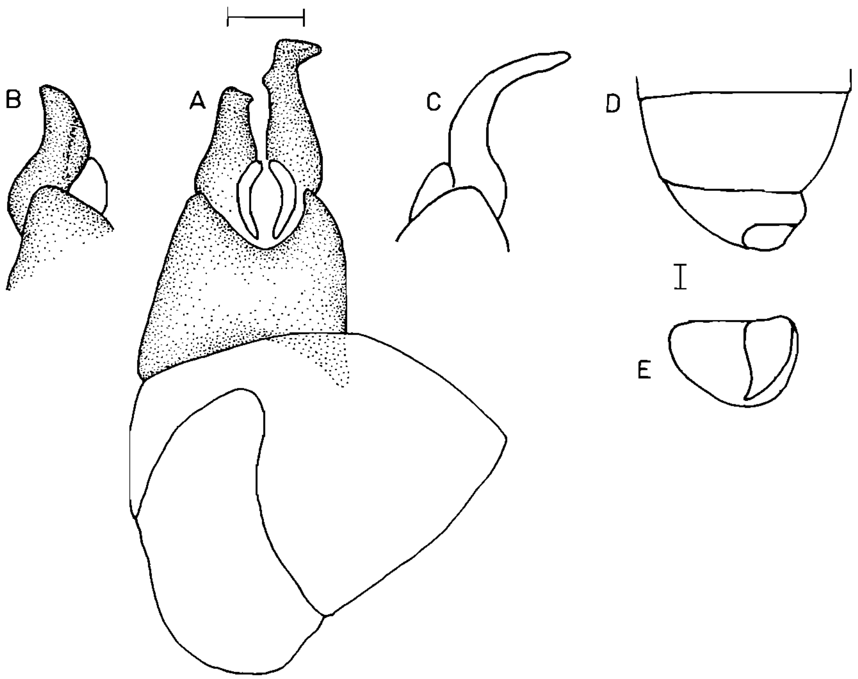

Fig. 13. *Tomosvaryella forchhammeri* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

2 strong basal spines. Terminalia (Fig. 37H) with base short; piercer about twice as long as base and slightly curved downwards.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, v.1986, Forchhammer (ISNB). Allotype: ♀, same locality and date as holotype (ISNB). Paratypes: same locality as holotype, 5 ♂ 7 ♀, iii.1986; 15 ♂ 3 ♀, iv.1986; 12 ♂ 4 ♀, v.1986; 4 ♂ 1 ♀, vi.1986; 2 ♂, vii.1986, Forchhammer (ISNB). Other material (excluded from type series): ANGOLA: 1 ♂, Bruco, 26.ii–2.iii.1972 (BMNH). MALAWI: 1 ♂, Ntchisi forest Res., 3–4.xii.1980, montane forest and woodland, Londt & Stuckenberg (NMSA). Paratypes deposited in IMS, ISNB and NMSA.

Etymology: This species is named for Mr Per Forchhammer, who collected the type series, and who has kindly collected pipunculids for several years at Serowe, Botswana.

Tomosvaryella gibbosa Hardy, 1949

Fig. 14

Tomosvaryella gibbosa Hardy, 1949: 71.

Body length 3,8 mm; wing length 3,6 mm.

Male:

Head: Third antennal segment acuminate; dark brown with greyish pubescence. Frons, eyes touching for length equal to ocellar triangle; lower part black-brown subshining, sparsely brown pubescent; upper part shining black. Occiput dark brown.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted; dorsocentral rows with short dark hairs. Scutellum more conspicuously shining than mesonotum, metallic as with abdominal terga. Halteres dark, knobs yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow.

Wing: Fourth costal section 3,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Terga mainly subshining black-brown; weakly brownish dusted; metallic bronze appearance; indistinct pilosity. Terminalia as in Fig. 14.

Female: Unknown.

Material examined: Holotype ♂, SOUTH AFRICA: Natal, Van Reenen, Drakensberg, xi.1926, R.E. Turner (BMNH). Additional material: ZAÏRE: 1 ♂, Upemba Park, 2 mls W. Lusinga, 20.i.1958, Ross & Leech, 1710 m (CASC).

Tomosvaryella incondita Hardy, 1961

Fig. 15

Tomosvaryella incondita Hardy, 1961: 159.

Body length 2,7 mm; wing length 3,1 mm.

Male:

Head: Third antennal segment long-acuminate; brown with apical point paler. Frons, eyes not touching, narrowly separated; lower half of frons silver-grey pubescent;

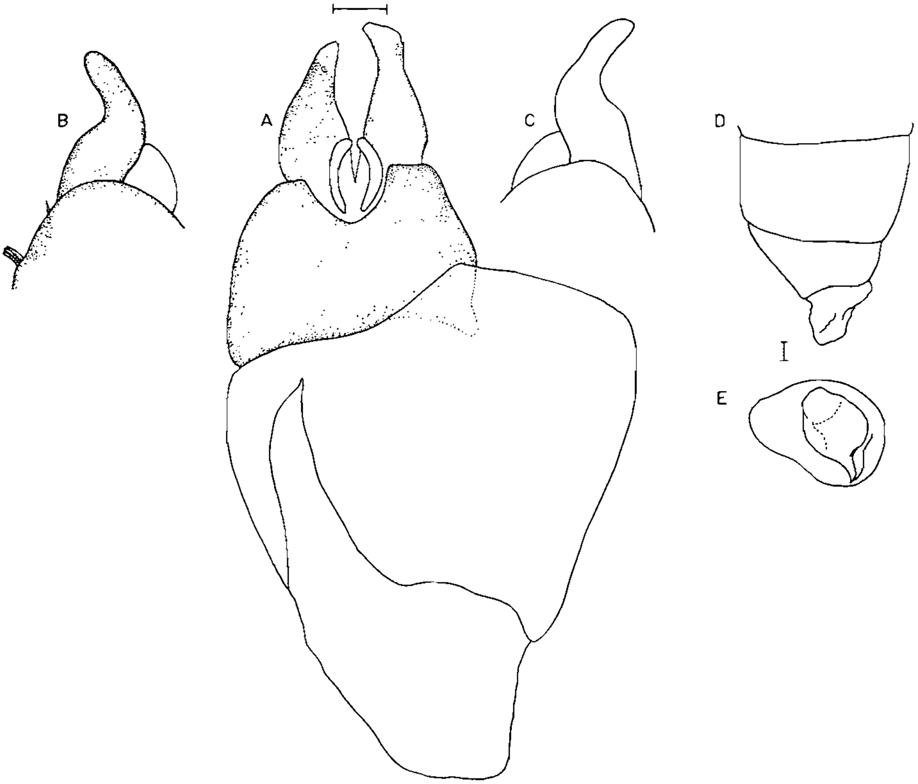

Fig. 14. *Tomosvaryella gibbosa* Hardy, 1949. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

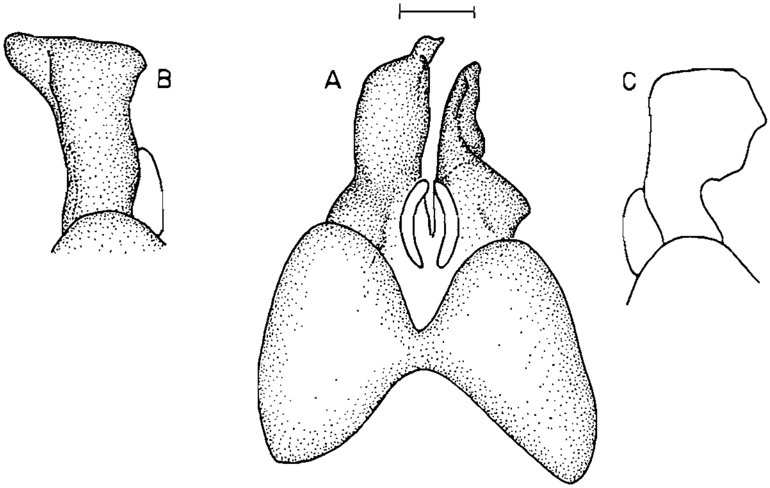

Fig. 15. *Tomosvaryella incondita* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus, lateral view. C. Inner surstylus, lateral view. Scale = 0,1 mm.

upper part shining black. Occiput with upper part shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black, coarsely punctate; dorsocentral rows with short pale hairs.

Legs: Dark; knees narrowly yellow. Trochanters apparently smooth (partly obscured in holotype).

Wing: Fourth costal section 1,5–2,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Tergum 2 shining black, with dispersed short pale hairs; others in glycerine. Terminalia as in Fig. 15.

Female: Unknown.

Material examined: Holotype ♂, ZAÏRE: Parc National Garamba, Pidigala, 23.iv.1952, H. De Saeger (MRAC).

Tomosvaryella insulicola sp. n.

Figs 16 & 37I

Body length 2,1–2,3 mm; wing length 2,4–2,5 mm.

Diagnosis: Hind male trochanters with pointed protuberance and with few short hairs apically; abdominal terga subshining black-brown with sparse brown dusting along lateral margins; abdominal sternum 8 with dorsal suture; surstyli subsymmetrical with inner surstylus slightly longer and turned inwards; ovipositor with base bearing one distinct protuberance, piercer longer than base and curved downwards.

Male:

Head: Third antennal segment long-acuminate, brown with whitish tip. Second antennal segment dark brown. Frons, eyes touching for distance equal to ocellar triangle; lower part occupying half of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper third shining black; lower part silver-grey pubescent.

Thorax: Humeri pale yellow. Mesonotum mainly subshining black-brown, weakly brownish dusted; dorsocentral rows with dark moderately long hairs, especially anteriorly. Scutellum same colour and dusting as centre of mesonotum. Halteres pale.

Legs: Dark; knees yellow with basal fifth of tibiae yellow. Hind trochanters with pointed protuberance (Fig. 16F), with few short hairs. Fore femora with 2 basal spines, mid femora with one, less developed basal spine. Tarsal segments pale, apical tarsal segment slightly darker.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: Lateral fan well developed with 6 darkish hairs. Terga mainly subshining black-brown; very sparsely brownish dusted along lateral margins; with dispersed pilosity of short darkish hairs, especially along lateral sides of second tergum. Sternum 8 half as long as tergum 5, with dorsal suture. Sterna dark brown. Membranous area occupying half of sternum 8. Terminalia (Fig. 16) with surstyli subsymmetrical, inner surstylus slightly longer and turned inwards; ejaculatory duct trifid and tubiform.

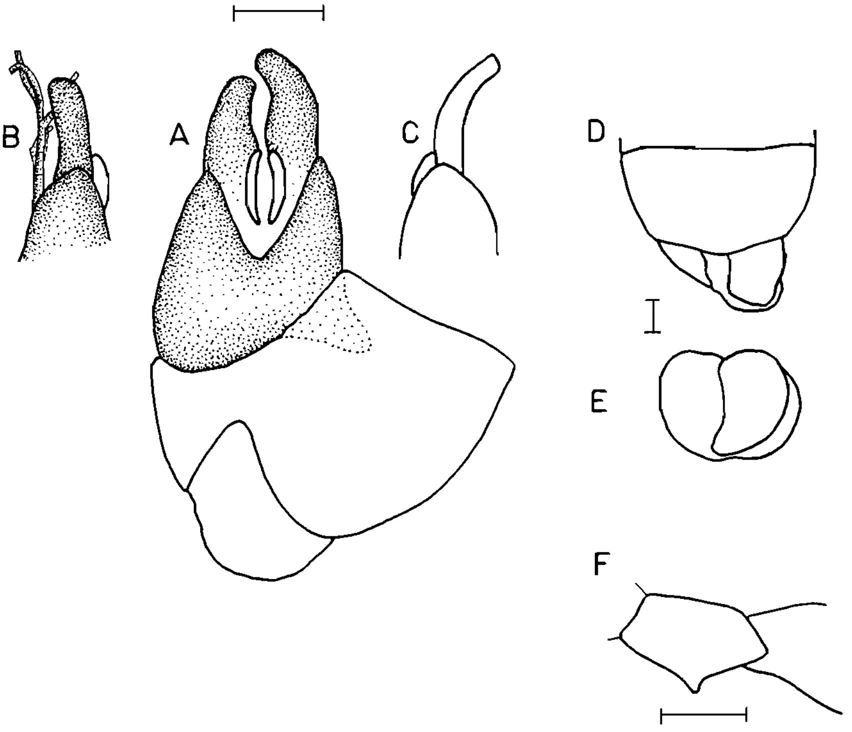

Fig. 16. *Tomosvaryella insulicola* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Female: As male except for the following characters. Frons shining black-brown for half of entire length. Legs and femora with basal spines, but trochanters smooth. Terminalia (Fig. 37I): base with one protuberance dorsally; piercer longer than base, slightly downcurved.

Material examined: Holotype ♂, COMOROS: Moheli, Miringoni, 2.x.1983, Jocqué & Janssens (MRAC). Allotype: ♀, same date and locality as holotype (MRAC). Paratypes: same locality as holotype, 1 ♂, 28.ix.1983; 1 ♂ 6 ♀, 2.x.1983; 2 ♀, 3.x.1983; 2 ♀, 5.x.1983, Jocqué & Janssens (ISNB, MRAC).

Etymology: The species name 'insulicola' means island dweller and refers to the type locality, the Comoros island of Moheli.

Tomosvaryella latitarsis Hardy, 1950

Fig. 17

Tomosvaryella latitarsis Hardy, 1950: 46.

Body length 4,1 mm; wing length 4,3 mm.

Male:

Head: Third antennal segment short-acuminate; dark brown. Frons, eyes touching for 1,5 times length of ocellar triangle; lower part sparsely greyish-brown pubescent; upper part shining black. Occiput with upper part shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum completely shining black; dorsocentral rows with moderately long blackish hairs.

Legs: Femora dark; tibiae yellow except median part darkened. Basitarsus of hind legs thickened.

Wing: Fourth costal section 3,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Very elongate. Terga shining black; with sparse but conspicuous moderately long pale pilosity. Terminalia as in Fig. 17.

Female: Apparently unknown. Hardy (1961) mentioned a female from Parc National de Garamba, which may belong here. According to the description it is similar to the male except that the abdomen is not elongate and the hind tarsi are not flattened. Frons with upper half shining black. Ovipositor straight and similar to that of *T. subvirescens* (no figure).

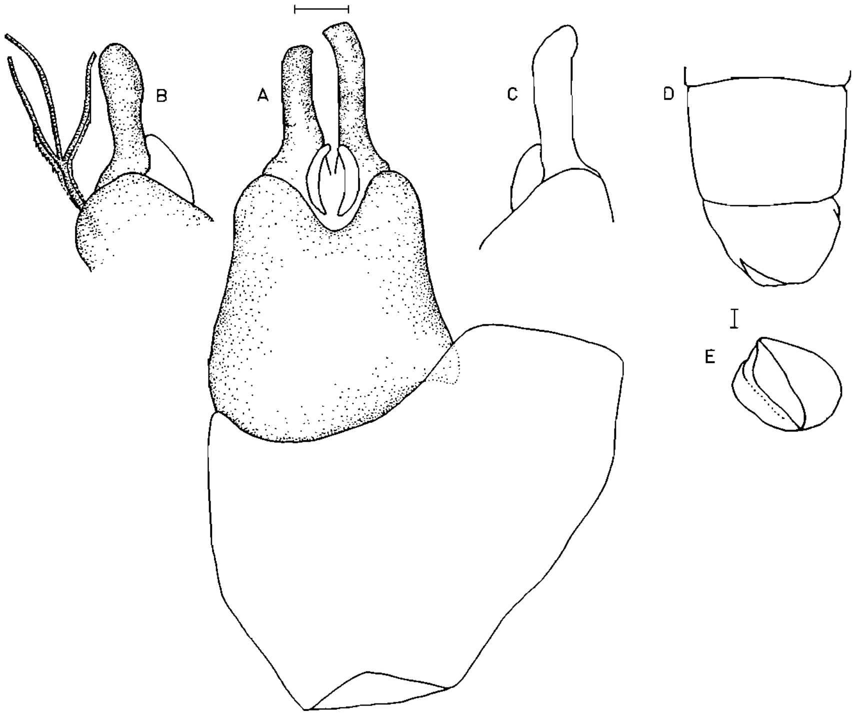

Fig. 17. *Tomosvaryella latitarsis* Hardy, 1950. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Material examined: Holotype ♂, RUANDA: Ruhengeri (river Penge), 29.ix.1934, G. F. de Witte, 1800–1825 m (MRAC)

Tomosvaryella mbuyensis Hardy, 1952

Figs 18 & 38A

Tomosvaryella mbuyensis Hardy, 1952: 68.

Body length 2,5–2,8 mm; wing length 2,7–3,0 mm.

Male:

Head: Third antennal segment acute; dark brown. Frons, lower part silver-grey pubescent; upper part obscured in holotype. Occiput silver-grey pubescent, upper part possibly more shining black (obscured in holotype).

Thorax: Humeri yellow. Mesonotum subshining black-brown, weakly brownish dusted; dorsocentral rows with short blackish hairs, longer anteriorly.

Legs: Dark; knees yellow with basal third of tibiae yellow. Hind trochanter with triangular roundish protuberance (Fig. 18E).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

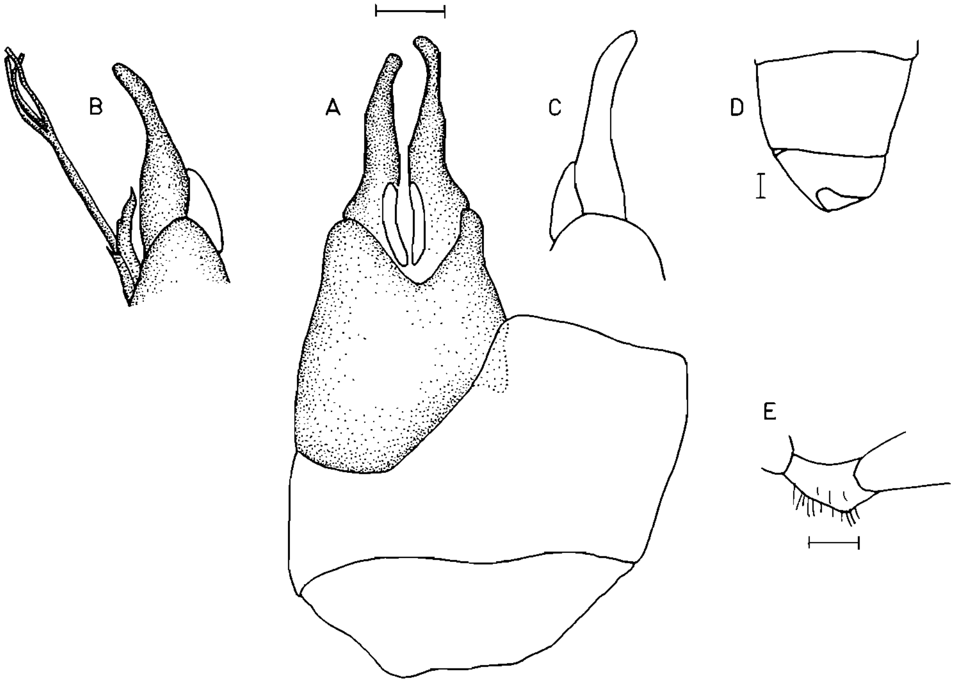

Fig. 18. *Tomosvaryella mbuyensis* Hardy, 1952. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male hind trochanter, frontal view (D & E after Hardy 1952). Scale = 0,1 mm.

Abdomen: Terga 2–3 subshining black-brown; sparsely brown dusted, more greyish along lateral margins; with short indistinct pilosity. Terminalia as in Fig. 18.

Female: As male except for the following characters. Third antennal segment acuminate. Frons with upper half shining black, lower part silver-grey pubescent. Occiput with upper third shining black, lower part silver-grey pubescent. Mesonotum more densely dusted. Legs smooth, no basal spines on femora. Lateral fan less developed. Terga subshining black-brown, weakly darkish dusted. Terminalia as in Fig. 38A.

Material examined: Holotype ♂, ZAÏRE: Parc National Upemba, Mbuye - Bala, 25–31.iii.1948, de Witte, 1750 m (MRAC). Allotype: ♀ , same date and locality as holotype (MRAC).

Tomosvaryella mesostena Hardy, 1961

Figs 19 & 38B

Tomosvaryella mesostena Hardy, 1961: 164.

Body length 3,0 mm; wing length 3,5 mm.

Male:

Head: Third antennal segment long-acuminate, pale brown with whitish tip. Frons, eyes not touching; lower part silver-grey pubescent (dull blackish in oblique view);

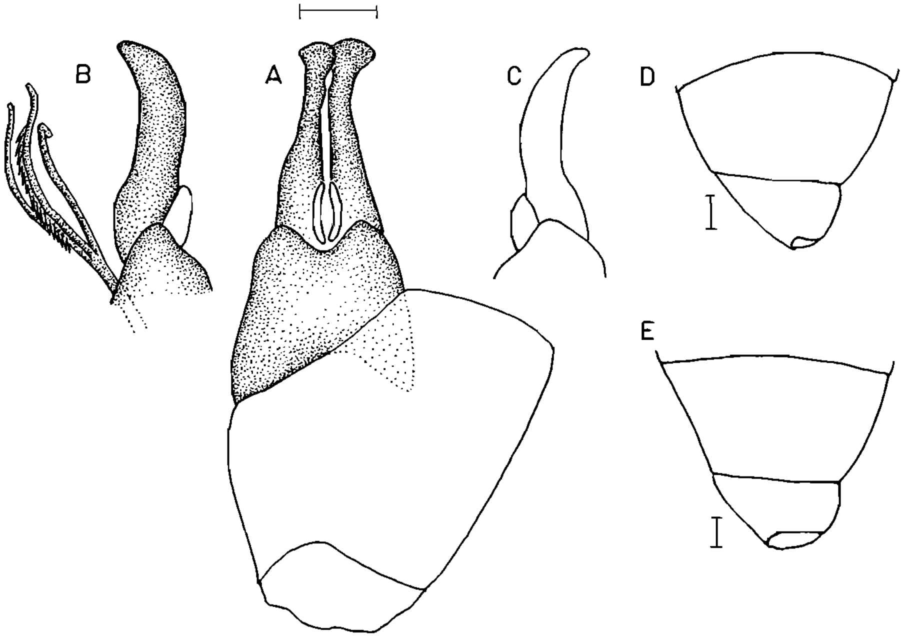

Fig. 19. *Tomosvaryella mesostena* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view (after Hardy 1961). E. Male tergum 5 and sternum 8, dorsal view. Scale = 0,1 mm.

upper part shining black. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black-brown, no dusting; dorsocentral rows with short, dark hairs.

Legs: Dark; knees yellow with basal fifth to third of tibiae yellow. Hind legs missing in holotype, trochanters smooth (according to original description).

Wing: Fourth costal section 2,0–3,0 times as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: In glycerine (holotype). According to the original description: terga shining black; rather thickly covered with short brown hairs. Terminalia as in Fig. 19.

Female: As male except for the following characters. Third antennal segment filiform. Frons with lower half silver-grey pubescent, upper part shining black. Humeri more whitish. Fore femora basally with 2 ventral spines. Abdomen with all terga shining black. Terminalia as in Fig. 38B.

Material examined: Holotype ♂, ZAÏRE: Parc National de Garamba, 'II/fd/10', 20.xii.1951, De Saeger (MRAC). Allotype: ♀, same locality as holotype, 'PpK 12/d/9', 2.i.1952, De Saeger (MRAC).

Tomosvaryella montana sp. n.

Fig. 20

Body length 2,8 mm; wing length 2,8 mm.

Diagnosis: Hind trochanters smooth; abdominal terga shining metallic black with lateral margins narrowly brownish dusted; abdominal sternum 8 without dorsal suture, membranous area narrow; surstyli symmetrical, elongate.

Male.

Head: Third antennal segment long-acuminate; brown, apically whitish. Second antennal segment black-brown. Frons, eyes touching for twice the length of ocellar triangle; lower part occupying one-third of entire length, golden brown pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper half subshining black, sparsely brownish pubescent; lower part more densely silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum mainly subshining black-brown, lightly brown dusted; dorsocentral rows indistinct, with short dark hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Dark; knees yellow with basal third to half and apical fifth of tibiae yellow; apical fifth of femora also yellow. Tarsal segments yellow, except apical segment dark. Trochanters smooth.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at basal third of discal cell.

Abdomen: Lateral fan with 4–5 short darkish bristly hairs. Terga shining black, metallic; along lateral margins narrowly brownish dusted; with inconspicuous dark pilosity. Sternum 8 more than half as long as tergum 5. Sterna dark brown. Membranous area narrow, occupying less than half of sternum 8. Terminalia (Fig. 20) with surstyli symmetrical, elongate, pointed apically; ejaculatory duct trifid and tubiform.

Female: Unknown.

Material examined: Holotype ♂, SOUTH AFRICA: Natal, Drakensberg Mts, Giants Castle Reserve, 18.x.1971, Stuckenberg & Irwin, 5800 ft (NMSA).

Etymology: The species name refers to the type locality in the Drakensberg mountains.

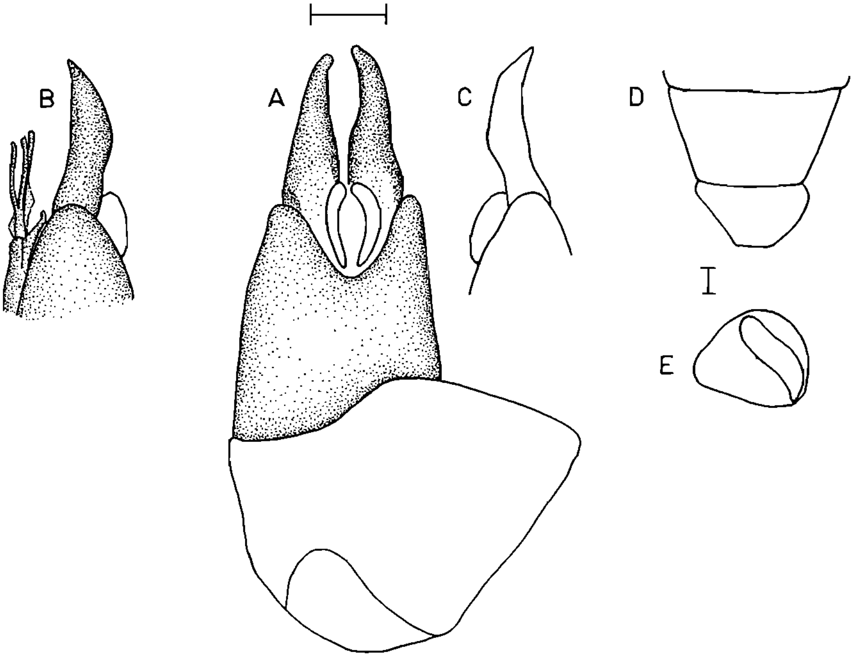

Fig. 20. *Tomosvaryella montana* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Tomosvaryella oligoseta sp. n.

Figs 21 & 38C

Body length 3,6–3,8 mm; wing length 3,8 mm.

Diagnosis: Hind trochanters smooth; abdominal terga mainly dull greyish dusted; lateral fan completely reduced; abdominal sternum 8 without dorsal suture; surstyli symmetrical, apically bróadened; one ejaculatory ductulus with row of small teeth along entire length; ovipositor with broad base, piercer sligtly longer and curved upwards.

Male:

Head: Third antennal segment short-acuminate, brown, with whitish fringe anteriorly. Second antennal segment brown. Frons, eyes touching for distance equal to ocellar triangle; lower part occupying half of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper third shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum punctate, mainly dull, greyish dusted; dorsocentral rows indistinct. Scutellum same colour and dusting as centre of mesonotum. Halteres pale yellow.

Legs: Dark; knees yellow with basal third to fourth of tibiae yellow. Tarsal segments brownish, apical tarsal segment darker. Trochanter smooth.

Wing: Fourth costal section 4,0 times as long as third costal section. Crossvein r-m positioned just beyond middle of discal cell.

Abdomen: Lateral fan completely reduced. Terga mainly dull, greyish dusted. Sternum 8 less than half as long as tergum 5. Sterna dark brown. Membranous area occupying half of sternum 8. Terminalia (Fig. 21) with surstyli symmetrical, distally broadened, in lateral view curved downwards; ejaculatory duct long-trifid; one ductulus with small teeth.

Female: As male except for the following characters. Frons shining black for distance equal to twice ocellar triangle. Fore femora with 2 ventral spines. Pulvilli larger than apical tarsal segment. Terminalia (Fig. 38C) with base broad; piercer slightly longer, curved upwards.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, viii.1989, Forchhammer (ISNB). Allotype: ♀, same locality as holotype, xii.1988 (ISNB). Paratypes: same locality as holotype,

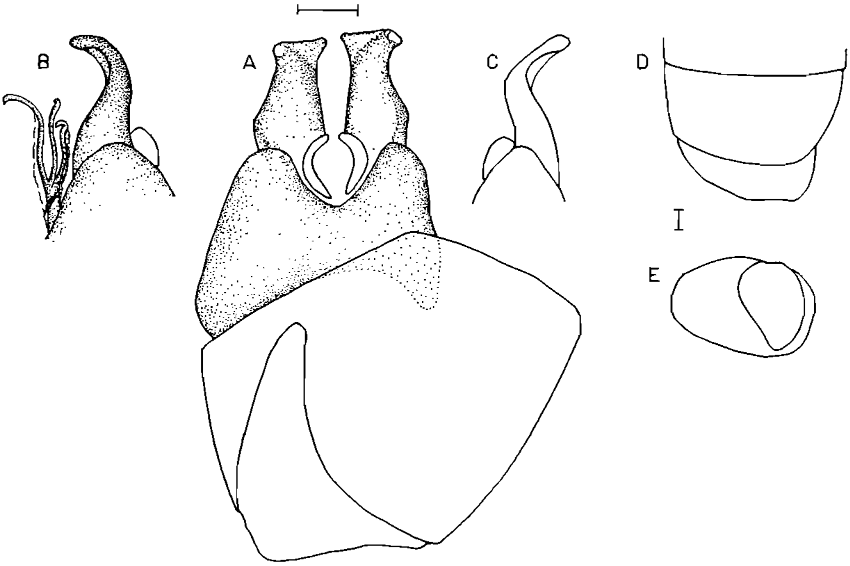

Fig. 21. *Tomosvaryella oligoseta* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

1 ♂, iii.1989; 2 ♂, ix.1989 (IMS, ISNB). Additional material (excluded from type series): NAMIBIA: 1 ♂, Inguma fm, 55 mls NW. Tsumeb, 17–19.ii.1972 (BMNH).

Etymology: The name 'oligoseta' means few hairs and refers to the reduced lateral fan and dorsocentral rows in this species.

Tomosvaryella parvicuspis Hardy, 1961

Figs 22 & 38D

Tomosvaryella parvicuspis Hardy, 1961: 166.

Body length 2,7–3,0 mm; wing length 3,0–3,3 mm.

Male:

Head: Missing in holotype, description based on paratype. Third antennal segment acuminate, brown. Frons, eyes touching for twice the length of ocellar triangle; lower part silver-grey pubescent; upper part shining black. Occiput with upper third sparsely brownish pubescent, subshining black; lower part more densely silver-grey pubescent.

Thorax: Humeri darkish yellow. Mesonotum mainly subshining black-brown, sparsely brownish dusted; dorsocentral hairs indistinct.

Legs: Dark; knees yellow with basal fifth of tibiae yellow.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned just beyond middle of discal cell.

Abdomen: Terga 1–2 subshining black-brown; darkish brown dusted; apparently with short pilosity (other terga in glycerine). Terminalia as in Fig. 22.

Female: As male except for the following characters. Third antennal segment mainly yellow-brown. Frons silver-grey pubescent, in front of ocellar triangle shining black

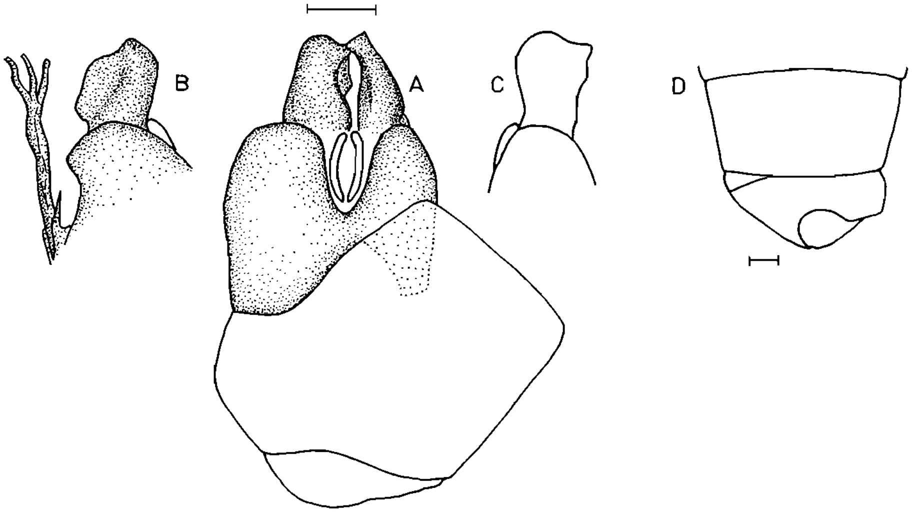

Fig. 22. *Tomosvaryella parvicuspis* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view (after Hardy 1961). Scale = 0,1 mm.

for length of triangle. Tibiae more yellowish, also apical margin yellow. Lateral margins of abdominal terga greyish dusted, with conspiuous pale pilosity. Terminalia as in Fig. 38D.

Material examined: Holotype ♂, ZAÏRE: Parc National de Garamba, 'II/gd/11', 4.ix.1952, De Saeger (MRAC). Paratypes: same locality as holotype, 1 ♂, 'II/e', 3.i.1951, Verschueren; 1 ♀, 'II/gd/4', 27.xii.1951, De Saeger; 1 ♀, 'II/fc/6', 11.x.1951, De Saeger (all MRAC).

Remarks: According to Hardy (1961), the females do not belong to type series. However, in the MRAC collection they are labelled as paratypes.

Tomosvaryella propria Hardy, 1949

Figs 23 & 38E

Tomosvaryella propria Hardy, 1949: 73.
Tomosvaryella varana Hardy, 1949: 76. **Syn. n.**

Body length 2,8–4,1 mm; wing length 2,7–3,8 mm.

Male:

Head: Third antennal segment acuminate; brown. Frons, eyes touching for 1,5–2,0 times length of ocellar triangle; lower part occupying half of entire length, usually silver-grey pubescent, sometimes more brownish; upper part shining black. Occiput with upper half brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow, sometimes paler. Mesonotum weakly subshining black-brown, mainly brownish dusted, humeri greyish dusted dorsally; dorsocentral rows with short dark hairs. Halteres yellowish brown, sometimes paler.

Legs: Dark brown; knees yellow with basal fifth to third of tibiae yellow. First four tarsal segments yellow-brown, apical segment darker.

Wing: Fourth costal section variable, 2,0–3,5 times as long as third costal section. Crossvein r-m positioned just beyond middle of discal cell.

Abdomen: Lateral fan with few dark hairs. Terga weakly subshining black-brown; brownish dusted, second tergum mainly greyish dusted, tergum 5 with large greyish spots laterally, sometimes all abdominal terga greyish; no distinct pilosity. Terminalia as in Fig. 23.

Female: As male except for the following characters. Third antennal segment pale brown. Frons with upper half shining black; lower part silver-grey pubescent. Fourth costal section 1,5 times as long as third costal section. Hind tarsi slightly broadened. Abdominal terga brownish dusted, lateral margins greyish dusted. Terminalia as in Fig. 38E.

Material examined: Holotype (*propria*) ♂, SOUTH AFRICA: Cape Province, Mossel Bay, vi–vii.1930 (BMNH). Holotype (*varana*) ♂, SOUTH AFRICA: Cape Town, Milnerton, i.1926, Turner (BMNH). Allotype (*varana*): ♀, same locality as holotype, ii.1926 (BMNH). Additional material: 38 specimens from South Africa, Botswana and Gambia.

The following paratypes of *varana* are not conspecific with the allotype: SOUTH AFRICA: 1♀, Cape, Mossel Bay, vi-vii.1930, Turner; 1♀, Royal Natal National

Park, iii.1932, Mackie. NAMIBIA: 1 ♀, xii.1929, Turner (all BMNH). They could not be included in any of the other known species.

Remarks: Study of the type material of *varana* and *propria*, based on external morphology and the structure of the male genitalia, showed these taxa to be conspecific, hence *varana* is synonymised with *propria*. The main difference mentioned by Hardy (1949) is in the membranous area. This is a soft structure and is variable in expansion, especially in species with a large ejaculatory duct as in this case.

However, amongst the specimens resembling *propria* at my disposal, particularly a long series from Botswana, males show marked variation in the shape of the inner surstylus. Although the external morphology is the same, differences in the surstylus are remarkable (see Figs 23–25). Based on these differences in the male genitalia, two additional species (*spinigera* and *singularis*) are described below.

In females no differences could be ascertained between *propria*, *spinigera* and *singularis*. Thirty nine females of *T. propria s.l.* were seen from Botswana, Tanzania and South Africa.

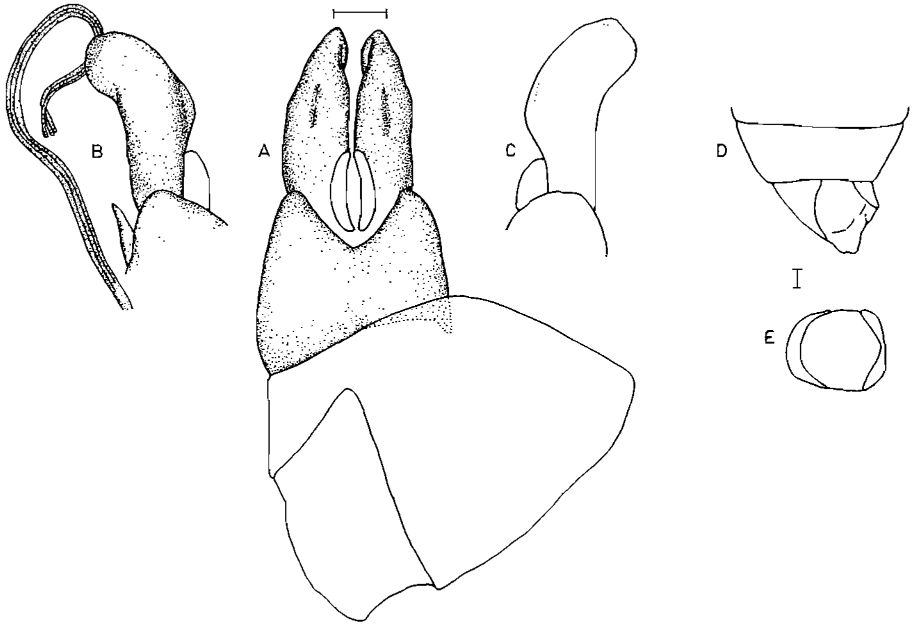

Fig. 23. *Tomosvaryella propria* Hardy, 1949. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. Scale = 0,1 mm.

Tomosvaryella spinigera sp. n.

Fig. 24

Diagnosis: Hind trochanters smooth; abdominal terga weakly subshining black-brown; abdominal sternum 8 without dorsal suture, membranous area large, occupying almost entire width; surstyli asymmetrical with inner surstylus pointed apically; ejaculatory ductuli tubiform, much longer than surstyli.

Male:

Identical to *propria*, except for the following differences in the male genitalia: inner surstylus with longer and more sharply pointed apex (Fig. 24); both surstyli in *propria* with blunt tip (Fig. 23).

Female: Indistinguishable from *propria* female.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, iii.1986, Forchhammer (ISNB). Paratypes: same locality as holotype, 2 ♂, i.1986; 2 ♂, iii.1986; 1 ♂, iv.1986; 2 ♂, vi.1986, Forchhammer. Other material (excluded from type series): BOTSWANA: 1 ♂, Mahalapye, Madiba Secondary School, 15–31.vii.1986, De Meyer (ISNB). SOUTH AFRICA: *Cape Province*: 1 ♂, 16 mls N. of Cradock farm 'Who can tell', 11.iii.1972, Iriwn (NMSA). Paratypes in ISNB, IMS, and NMSA.

Etymology: The name 'spinigera' means spine-bearer and refers to the pointed inner surstylus of this species.

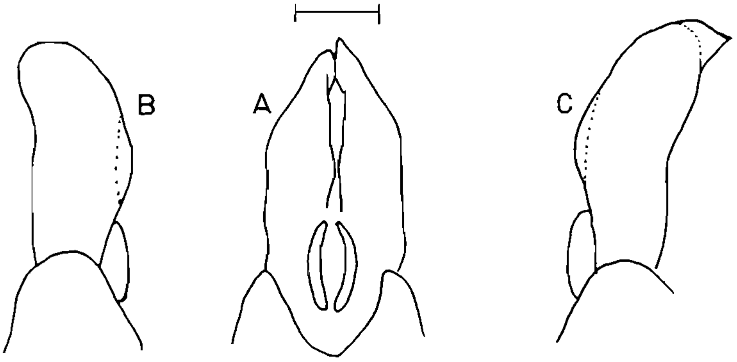

Fig. 24. *Tomosvaryella spinigera* sp. n. A. Male surstyli, dorsal view. B. Outer surstylus, lateral view. C. Inner surstylus, lateral view. Scale = 0,1 mm.

Tomosvaryella singularis sp. n.

Fig. 25

Diagnosis: Hind trochanters smooth; abdominal terga weakly subshining black-brown; abdominal sternum 8 without dorsal suture, membranous area large and occupying almost entire width; surstyli asymmetrical with inner surstylus elongated into downwardly curved, spoon-like appendage; ejaculatory ductuli tubiform, much longer than surstyli.

Male:

Identical to *propria* and *spinigera*, except for the following differences in the male genitalia: inner surstylus more elongate, completely downcurved in lateral view and somewhat spoon-shaped apically (Fig. 25).

Female: Indistinguishable from *propria* and *spinigera*.

Material examined: Holotype ♂, BOTSWANA: Swaneng Hill, Farmers Brigade, 5 km SE. of Serowe Hillside, North slope, i.1986, Forchhammer (ISNB). Paratypes: same locality as holotype, 2 ♂, 16.vi.1985 (NMSA); 2 ♂, xi.1985; 28 ♂, xii.1985; 28 ♂, i.1986; 3 ♂, iii.1986; 3 ♂, iv.1986; 4 ♂, v.1986; 3 ♂, vi.1986; 5 ♂, viii.1986, Forchhammer (ISNB). Other material (excluded from type series): BOTSWANA, Moeng college, 2 ♂, 6–15.ix.1986; 2 ♂, 15–24.ix.1986, De Meyer; 49 ♂, Mahalapye, Madiba Secondary School, Science garden, 13.iii-13.viii.1986, De Meyer (ISNB). NAMIBIA: 1 ♂, Onguma fm, 55 mls NW. Tsumeb, 17–19.ii.1971 (BMNH). SOUTH AFRICA: 1 ♂, Natal, Drummond, 18.ix.1983, Freidberg (TAUI). Paratypes in IMS, ISNB and NMSA.

Etymology: The species name 'singularis' means unique or extraordinary and refers to the shape of the inner surstylus.

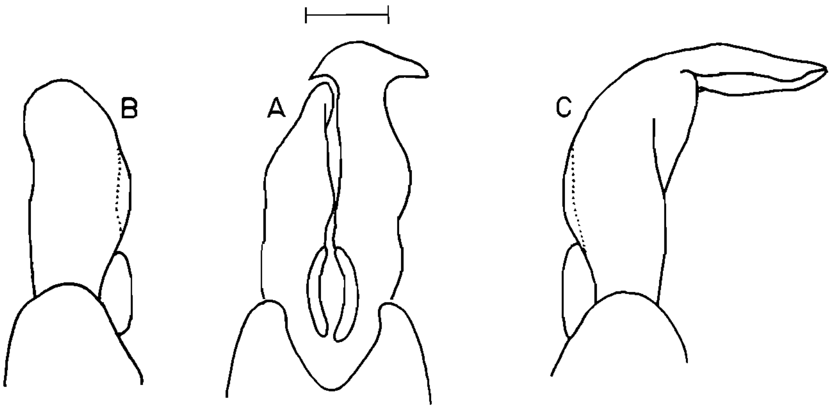

Fig. 25. *Tomosvaryella singularis* sp. n. A. Male surstyli, dorsal view. B. Outer surstylus, lateral view. C. Inner surstylus, lateral view. Scale = 0,1 mm.

Tomosvaryella ruwenzoriensis sp. n.

Fig. 26

Body length 2,2 mm; wing length 2,3 mm.

Diagnosis: Male hind trochanters with triangular protuberance; abdominal terga shining black without any dusting; abdominal sternum 8 without dorsal suture; surstyli subsymmetrical with inner surstylus slightly longer and curved inwards; one ejaculatory ductulus with long appendage and one tooth.

Male:

Head: Third antennal segment acuminate, light brown. Second antennal segment dark brown. Frons, eyes touching for distance equal to ocellar triangle; lower part occupying half of entire length, silver-grey pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri pale yellow. Mesonotum shining black, sparsely brownish dusted along anterior half; dorsocentral rows with moderately long dark hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres pale yellow.

Legs: Dark; knees yellow with basal margin of tibiae yellow. Tarsal segments yellow-brown, apical tarsal segment dark. Fore femora ventrally with 2 basal spines; hind trochanters with triangular protuberance (Fig. 26F).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: Lateral fan with 4 darkish bristles. Terga shining black; no dusting; with sparse short pilosity. Sternum 8 more than half as long as tergum 5. Sterna dark brown. Membranous area rounded above, narrow below; occupying less than half of sternum 8. Terminalia (Fig. 26) with surstyli subsymmetrical, inner surstylus slightly longer and curved inwards; ejaculatory duct trifid, one ductulus with long appendage and one tooth.

Female: Unknown.

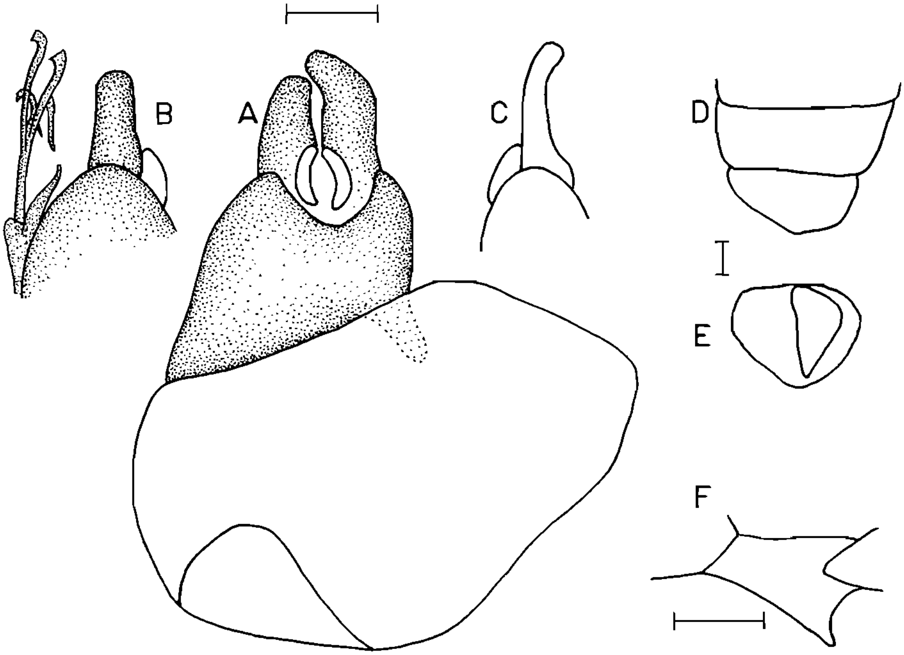

Fig. 26. *Tomosvaryella ruwenzoriensis* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Material examined: Holotype ♂, ZAÏRE: Parc National Albert, Massif Ruwenzori, Bomboka, près Kyandolire, 15.x.1952, Vanschuytbroeck & Kekenbosch, 1650 m (MRAC).

Etymology: The species name refers to the type locality, the Ruwenzori mountains.

Tomosvaryella setositora Hardy, 1961

Fig. 27

Tomosvaryella setositora Hardy, 1961: 168.

Body length 2,6 mm; wing length 2,7 mm.

Male:

Head: Third antennal segment acute, brown. Frons, eyes touching for length equal to ocellar triangle; lower part subshining black, sparsely greyish pubescent; upper part shining black. Occiput with upper third subshining black, greyish brown pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted; dorsocentral rows with short darkish hairs.

Legs: Dark; knees yellow with basal fifth of tibiae yellow. Hind legs missing, according to original description hind trochanters have basal swelling with 2–3 short bristles (Fig. 27E), and hind tarsi flattened with basitarsus broader than tibia.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: First tergum brownish, others in glycerine. According to original description subshining black, brownish dusted, sparsely covered with short hairs. Terminalia as in Fig. 27.

Female: Unknown.

Material examined: Holotype ♂, ZAÏRE: Parc National de Garamba, '11/fd/7', 5.v.1952, De Saeger (MRAC).

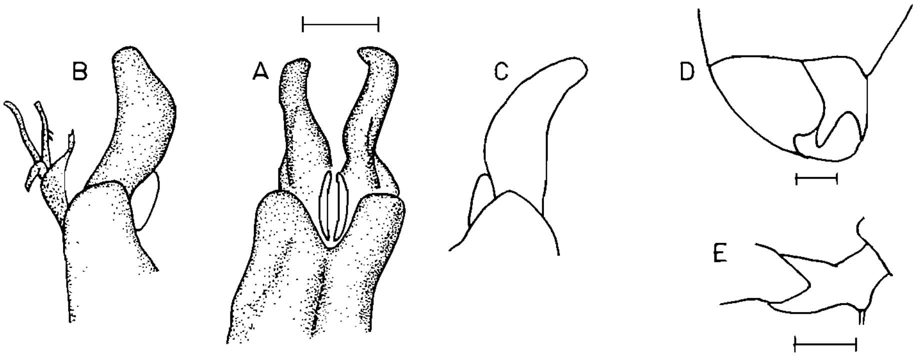

Fig. 27. *Tomosvaryella setositora* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male hind trochanter, frontal view (D & E after Hardy 1961). Scale = 0,1 mm.

Tomosvaryella singula Hardy, 1950

Figs 28 & 38F

Tomosvaryella singula Hardy, 1950: 47.

Body length 2,4 mm; wing length 2,6–2,7 mm.

Male:

Head: Missing in holotype. Third antennal segment short-acuminate (missing according to original description, information cited by Kirk-Spriggs 1988). Frons, eyes touching for length equal to 9 facets; lower part silver-grey pubescent, upper part shining black. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum shining black-brown, only anterior margin sparsely brownish dusted; dorsocentral rows with short to moderately long dark hairs.

Legs: Dark; knees yellow with basal third of tibiae yellow. Apices of tibiae yellow. Hind trochanter with rod-like protuberance, apically with few hairs (Fig. 28F).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Terga shining black-brown; metallic appearance, along lateral margins greyish dusted; with conspicuous moderately long pilosity. Terminalia as in Fig. 28.

Female: As male except for the following characters. Frons with upper half shining black, lower part silver-grey pubescent. Hind trochanters with slightly ridged lobe; hind basitarsi flattened. Abdominal pilosity shorter, darker and less distinct dorsally. Terminalia as in Fig. 38F.

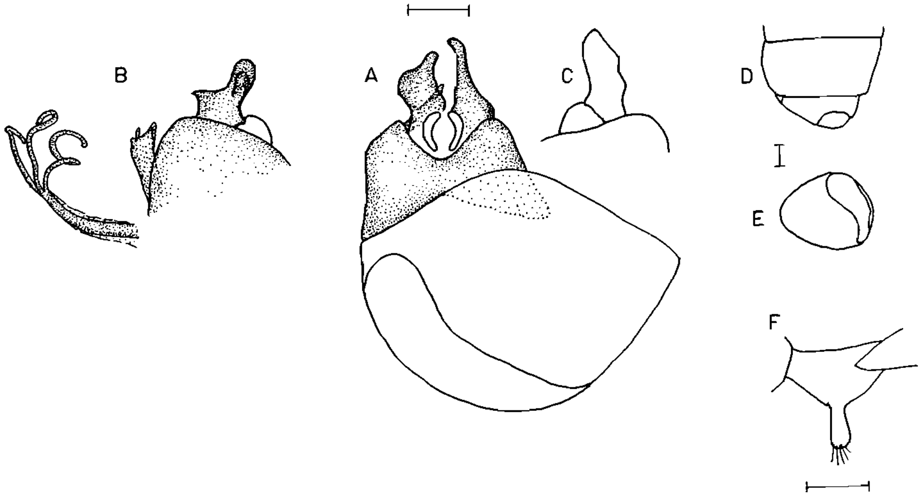

Fig. 28. *Tomosvaryella singula* Hardy, 1950. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Material examined: Holotype ♂, ZAÏRE: Kivu, Rutshuru, 4.vii.1935, de Witte, 1250 m (MRAC). Additional material: PRINCIPE ISLAND: 1 ♀, 19.xii.1932, Tams (BMNH). CAMEROON: 1 ♀ 1 ♀, Garoma, viii.1955, Descamps (BMNH).

Remarks: This is the only Afrotropical *Tomosvaryella* species for which the puparium is described and potential hosts mentioned. Kirk-Spriggs (1988) mentions that *singula* is abundant in rice plots heavily infested with *Cofana* species (Cicadellidae).

Tomosvaryella singuloides sp. n.

Fig. 29

Body length 2,7 mm; wing length 2,8 mm.

Diagnosis: Male hind trochanters with rod-like appendage and apical brush of short white hairs; abdominal terga shining metallic black-brown with greyish dusting along lateral margins; surstyli subsymmetrical; ejaculatory ductuli coiled; epandrium constricted in medially.

Male:

Head: Third antennal segment long-acuminate, brown. Second antennal segment dark brown. Frons, eyes touching for length slightly shorter than ocellar triangle; lower part occupying two-thirds of entire length, silver-grey pubescent below and brownish above; upper part of frons shining black. Face silver-grey pubescent. Occiput with upper third shining black, weakly brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum weakly subshining black-brown, brownish dusted, greyish anteriorly; dorsocentral rows with short dark hairs, anteriorly slightly

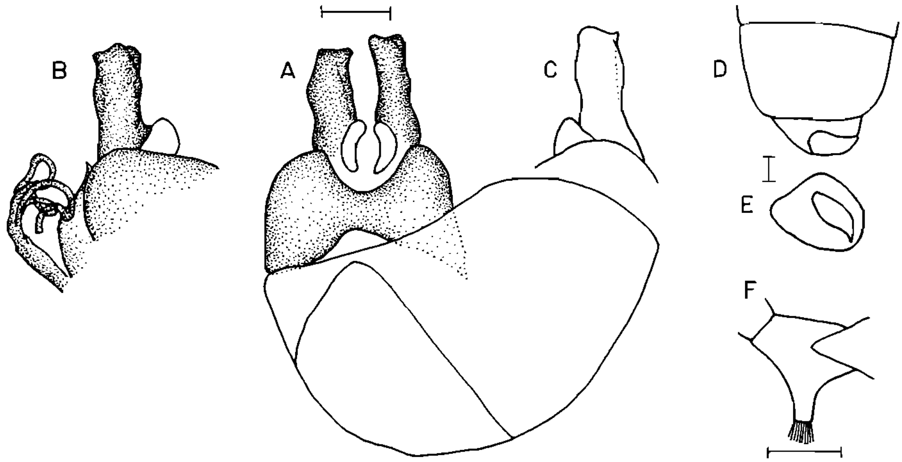

Fig. 29. *Tomosvaryella singuloides* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

longer. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow. Tarsal segments yellow, apical tarsal segment dark. Hind trochanter with rod-like protuberance and apical brush of short white hairs (Fig. 29F).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with moderately long dark hairs. Terga shining black-brown; metallic appearance, greyish dusted along lateral margins; with conspicuous moderately long dark pilosity. Sternum 8 less than half as long as tergum 5, greyish dusted. Sterna dark brown. Membranous area directed to right side. Terminalia (Fig. 29) with surstyli subsymmetrical; ejaculatory duct trifid, coiled tubiform; epandrium constricted medially.

Female: Unknown.

Material examined: Holotype ♂, ETHIOPIA: Awassi, 15.vii.1973, Demasi (CASC, Nr. 17025).

Etymology: The species name refers to the close relationship with the former species, *T. singula*.

Tomosvaryella speciosa Hardy, 1949

Fig. 38G

Tomosvaryella speciosa Hardy, 1949: 74.

Body length 2,8 mm; wing length 3,0 mm.

Female:

Head: Third antennal segment filiform, pale yellow. Frons with lower half silver-grey pubescent and upper half shining black. Occiput with upper third weakly brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted, anteriorly more greyish dusted; dorsocentral rows with short pale hairs.

Legs: Dark; trochanters pale brown, knees yellow with basal two-fifths of tibiae yellow, apical margin of tibia yellow.

Wing: Fourth costal section 1,5 times as long as third costal section. Crossvein r-m positioned before middle of discal cell.

Abdomen: Terga shining black-brown; second tergum weakly brownish dusted medially, all terga greyish brown dusted along lateral margins; with short pilosity. Terminalia as in Fig. 38G.

Male: Unknown.

Material examined: Holotype ♀, SOUTH AFRICA: Cape Province, Somerset East, xi.1930, Turner (BMNH).

Tomosvaryella subafricana sp. n.

Figs 30 & 38H

Body length 2,4–2,5 mm; wing length 2,2–2,3 mm.

Diagnosis: Male hind trochanters with long rod-like protuberance bearing 3 short bristles apically; hind femora distinctly broadened and basally with ventral triangular protuberance; abdominal terga subshining black-brown with brownish and greyish dusting; abdominal sternum 8 with dorsal suture; surstyli subsymmetrical with apices turned inwards; ovipositor with base roundish, piercer straight and twice as long as base.

Male:

Head: Third antennal segment short-acuminate; brown, with apical fringe whitish. Second antennal segment dark brown. Frons, eyes touching for length equal to 1,0–1,5 times the ocellar triangle; lower part occupying half of entire length, golden brown pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper part brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted; dorsocentral rows with short to moderately long darkish hairs, longer anteriorly.

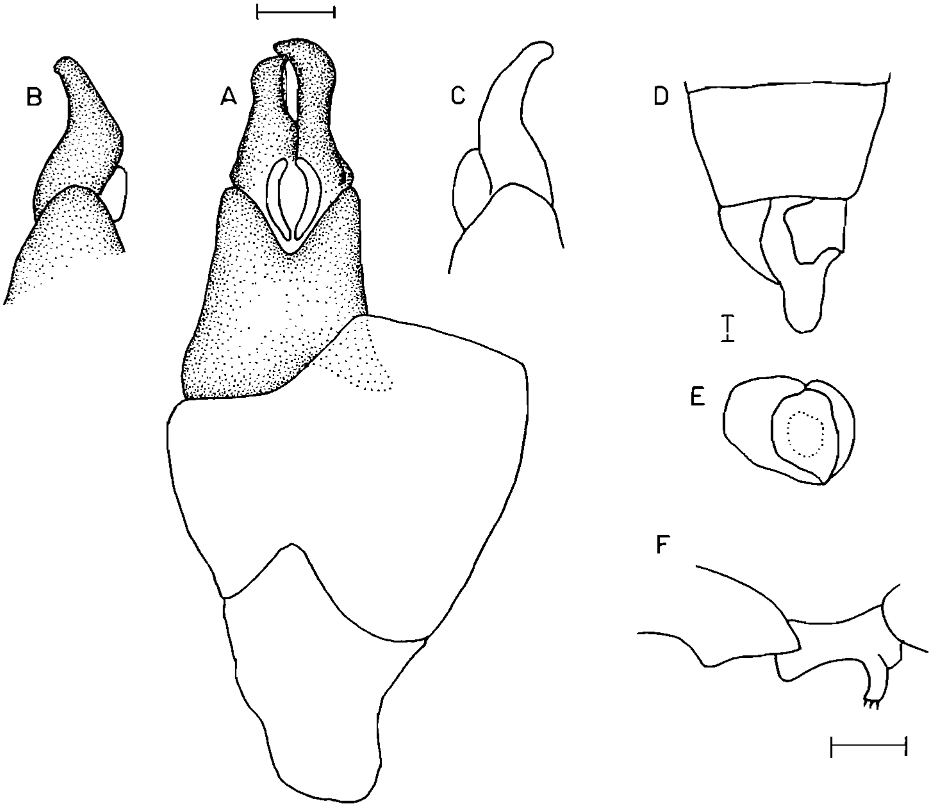

Fig. 30. *Tomosvaryella subafricana* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Scutellum same colour and dusting as centre of mesonotum, with short hairs along apical margin. Halteres yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow. Tarsal segments yellowish except apical tarsal segment dark. Hind femora distinctly broadened, especially in apical half, hind tibia strongly curved with apex distinctly broadened. Hind trochanter with long rod-like protuberance bearing 3 short bristles apically, hind femora with triangular protuberance basoventrally (Fig. 30F).

Wing: Fourth costal section 3,0–4,0 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with several long pale hairs. Terga subshining black-brown; brownish dusted, along lateral margins more greyish; with distinct but inconspicuous pilosity. Sternum 8 longer than half the length of tergum 5, with suture dorsally. Sterna dark brown. Membranous area occupying half of sternum 8; rounded above, pointed below. Terminalia (Fig. 30) with surstyli subsymmetrical, apices turned inwards; ejaculatory duct trifid.

Female: A single female from South Africa apparently belongs to this species (hind femur and tibia of similar shape to male). However, since it was not associated with males, it is excluded from the type series. It resembles the male except for the following characters. Frons silver-grey pubescent, in front of ocellar triangle subshining black. Third antennal segment more yellowish. Hind trochanters with basal spine; fore femora ventrally with 2 basal spines. Fourth costal section only about twice as long as third costal section. Terminalia (Fig. 38H) with base roundish; piercer straight, twice as long as base.

Material examined: Holotype ♂, SOUTH AFRICA: Natal, Royal Natal National Park, Drakensberg Mts, 13.ix.1963, Stuckenberg, 1500 m (NMSA). Paratypes: SOUTH AFRICA: *Natal*: 1 ♂, Pinetown District, Gillitts, 29.xi.1962, Stuckenberg; 1 ♂, Karkloof Range, near Mt Alida, 24.xii.1961, Stuckenberg; 1 ♂, Pietermaritzburg distr., Zwartkop location, viii.1959 (all NMSA); 1 ♂, Drummond, 18.ix.1983, Freidberg (TAUI). Additional material (excluded from type series): SOUTH AFRICA: *Natal*: 1 ♀, Tongaland, Ndumu Reserve, Ingwavuma district, 1–10.xii.1963, Stuckenberg (NMSA). One paratype deposited in ISNB.

Etymology: The species name refers to the close relationship with *T. africana*.

Tomosvaryella subvirescens (Loew, 1872)

Figs 31 & 38I

Pipunculus subvirescens Loew, 1872: 87.
Pipunculus glabrum Adams, 1905: 165.

Body length 2,7–3,1 mm; wing length 2,9–3,4 mm.

Male:

Head: Third antennal segment long-acuminate; brownish with apical margin paler. Frons, eyes touching for length equal to ocellar triangle; lower part silver-grey or greyish brown pubescent; upper part shining black. Occiput with upper fourth brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted;

dorsocentral rows with short dark hairs. Scutellum more shining black apically.

Legs: Dark; knees yellow with basal third of tibiae yellow. Hind trochanter with trapezoid protuberance, apically covered with minute pale hairs (Fig. 31F).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned beyond middle of discal cell.

Abdomen: Terga shining black-brown, with metallic appearance; lateral margins greyish dusted; with conspicuous short dark pilosity. Terminalia as in Fig. 31.

Female: As male except for the following characters. Frons shining black in upper half, concave; lower part silver-grey pubescent. Fore femora ventrally with 2 basal spines. Lateral margins of abdominal terga more greyish dusted. Terminalia as in Fig. 38I.

Material examined: Holotype ♂ (*subvirescens*), USA: Texas, Belfrage (MCZC). Additional material: 190 specimens from Botswana, Comoros archipelago, Kenya, Madagascar, Ruanda, South Africa, Tanzania, Yemen, Zambia, Zaïre, and Zimbabwe.

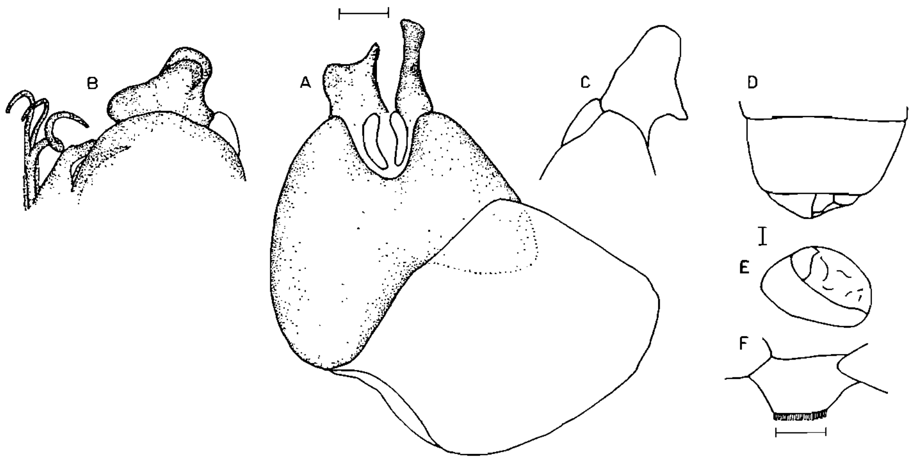

Fig. 31. *Tomosvaryella subvirescens* (Loew, 1872). A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Tomosvaryella sylvaticoides (Lamb, 1922)

Fig. 38J

Pipunculus sylvaticoides Lamb, 1922: 412.

Body length 2,7 mm; wing length 2,6 mm.

Female:

Head: Third antennal segment acuminate, yellowish. Frons with lower half silver-grey pubescent, upper part shining black. Occiput silver-grey pubescent, upper third more brownish.

Thorax: Humeri pale yellow. Mesonotum subshining black-brown, sparsely brownish dusted; dorsocentral rows with short to moderately long darkish hairs. Scutellum mainly shining black-brown.

Legs: Dark; knees yellow with basal fourth of tibiae yellow; apical margin of tibia narrowly yellow.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned before middle of discal cell.

Abdomen: Terga mainly shining black-brown; sparse brownish dusted along lateral margins; with conspicuous short to moderately long dark pilosity. Terminalia as in Fig. 38J.

Male: According to the original description, the type series includes one male and three females. However, in the list of material there is only mention of one specimen from Silhouette and two from Mahé. In BMNH only two females could be found (presented by the Percy Sladen Trust Expedition), and the whereabouts of the male syntype are unknown. The original description is inadequate and only mentions a resemblance to the Palaearctic species *T. sylvatica* (Meigen).

Material examined: 2 syntypes, SEYCHELLES: 1 ♀, Mahé, ix.1908; 1 ♀, Silhouette, 1908 (both in BMNH).

Tomosvaryella tecta sp. n.

Figs 32 & 38K

Body length 2,8–3,1 mm; wing length 3,0–3,1 mm.

Diagnosis: Male hind trochanters with triangular protuberance, apically covered with short pale hairs; abdominal terga shining black-brown with lateral margins greyish dusted and with conspicuous dark pilosity; abdominal sternum 8 with membranous area directed to right side; surstyli asymmetrical and of irregular shape; apex of aedeagus broadened; ovipositor with broad base, piercer as long as base, straight and thin.

Male:

Head: Third antennal segment long-acuminate; brownish with apical margin paler. Second antennal segment dark brown. Frons, eyes touching for length equal to ocellar triangle; lower part occupying two-thirds of entire length, silver-grey or greyish brown pubescent; upper part shining black. Face silver-grey pubescent. Occiput with upper fourth brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum subshining black-brown, brownish dusted; dorsocentral rows with short dark hairs. Scutellum same colour and dusting as centre of mesonotum, apically more shining black. Halteres yellow.

Legs: Dark; knees yellow with basal third of tibiae yellow, apical margin of tibia narrowly yellow. Hind trochanter with triangular protuberance (Fig. 32F), apically covered with minute pale hairs. Tarsal segments yellowish, except apical segment darkened.

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with 6 long black hairs. Terga shining black-brown, with metallic appearance; lateral margins greyish dusted; with conspicuous short dark pilosity. Sternum 8 half or less than half length of tergum 5; greyish dusted. Sterna dark brown, sparsely greyish dusted. Membranous area strongly directed to right side of sternum 8. Terminalia (Fig. 32) with surstyli asymmetrical, irregularly shaped; ejaculatory duct trifid, coiled; apex of aedeagus broadened; epandrium constricted medially.

Female: As male except for the following characters. Frons with upper half shining black, concave; lower part silver-grey pubescent. Fore femora ventrally with 2 basal spines; pulvilli very long, at least twice as long as apical tarsal segment. Lateral margins of abdominal terga conspicuously greyish dusted. Terminalia (Fig. 38K) with base broad; piercer as long as base; straight and thin.

Material examined: Holotype ♂, SOUTH AFRICA: Natal, Ndumu Game Reserve, camp & riverine bush, 4–9.x.1982, Londt (NMSA). Allotype ♀, SOUTH AFRICA: Natal, Rietspruit farm, 13km NE. Pietermaritzburg, 13.iii.1990, Whittington (NMSA). Paratypes: 1 ♂, same locality and date as holotype; 1 ♂, same locality and date as allotype; 1 ♂ 1 ♀, Tabeni river nr Richmond, 27.iv.1955, Stuckenberg; 1 ♂ 1 ♀, Lake Fundusi, Zoutpansberg range, i.1975, Lake Shore, Stuckenberg (all NMSA); Transvaal, 1 ♂ Rustenburg nature Reserve, 23–26.ii.1981, Millar (SANC).

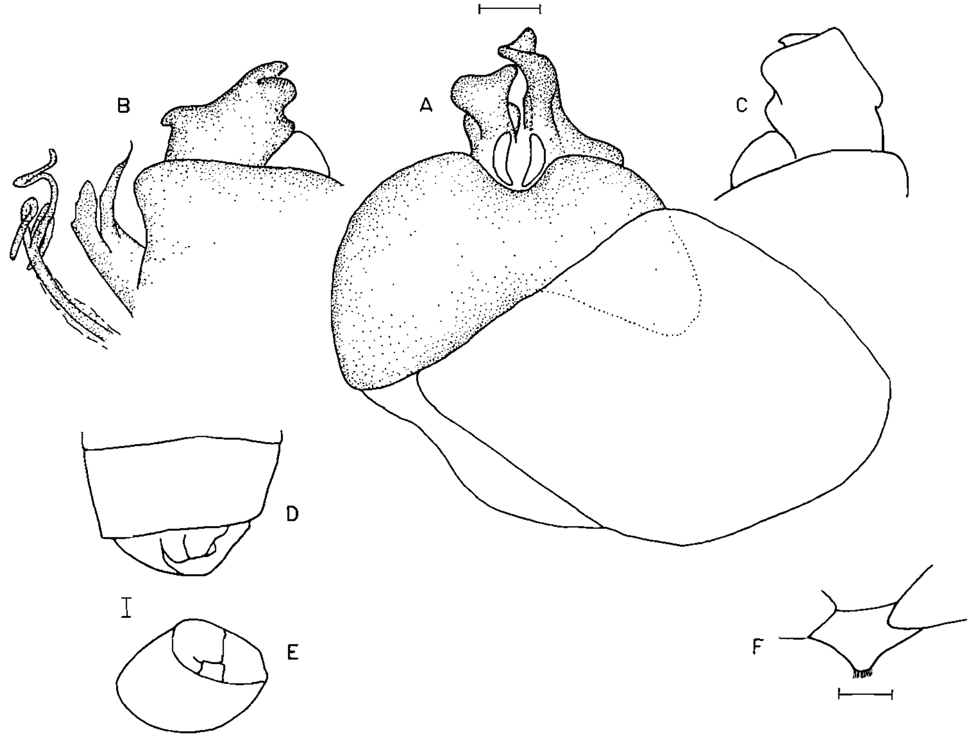

Fig. 32. *Tomosvaryella tecta* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

KENYA: 1 ♂, Taveta forest, viii.1947, Steele (BMNH). Some paratypes deposited in ISNB.

Remarks: External morphology closely resembles *T. subvirescens*, except that the legs are more yellow. Differences are also found in the shape of the protuberance on the hind trochanter (triangular instead of trapezoid), and in the male genitalia. Females are only distinguished from those of *subvirescens* based on coloration and a slight distinction in the terminalia (change from base to piercer more angular and less abrupt than *subvirescens*, see Figs 38I and 38K).

Etymology: The species name 'tecta' means disguised, and refers to the close resemblance to *T. subvirescens*.

Tomosvaryella torosa Hardy, 1961

Fig. 33

Tomosvaryella torosa Hardy, 1961: 173.

Body length 3,0–3,1 mm; wing length 3,0–3,2 mm.

Male:

Head: Third antennal segment long-acuminate, yellowish. Frons, eyes touching for 3,0 times the length of ocellar triangle; lower part silver-grey pubescent; upper part shining

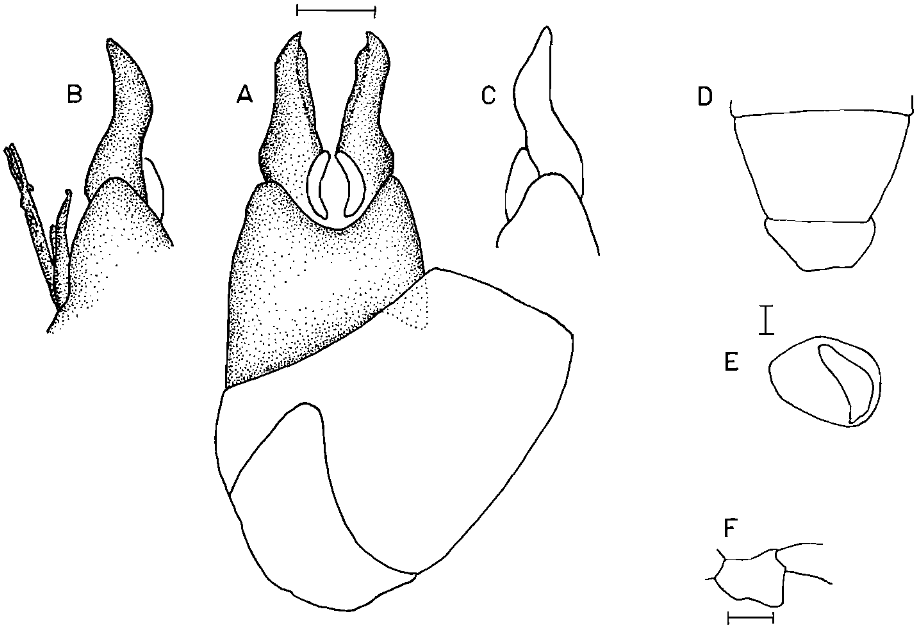

Fig. 33. *Tomosvaryella torosa* Hardy, 1961. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view (after Hardy 1961). Scale = 0,1 mm.

black. Occiput with upper two-fifths shining black; lower part silver-grey pubescent.

Thorax: Humeri dark brown, slightly paler than centre of mesonotum. Mesonotum shining black-brown, no dusting except sparsely brown along anterior margin; dorsocentral rows with short darkish hairs.

Legs: Dark; knees yellow with basal third to fourth of tibiae yellow; apical margin of tibia yellow. Hind femora thickened. Hind trochanter with elongate, keel-like protuberance (Fig. 33F).

Wing: Fourth costal section twice as long as third costal section. Crossvein r-m positioned at basal third of discal cell.

Abdomen: Terga shining black-brown; no dusting; no obvious pilosity except few darkish hairs along lateral margins of fifth tergum. Terminalia as in Fig. 33.

Female: Unknown.

Material examined: Holotype ♂, ZAÏRE: Parc National de Garamba, 'PFNK.12/9', 24.vii.1952, De Saeger (MRAC). Additional material: ZAÏRE: 1 ♂, Parc National Albert, Massif Ruwenzori, Kalonge, riv. Nyamwamba-Ihongero, 27.viii–2.ix.1952, 2480 m (étage bambous); 1 ♂, Moyenne Lume, Kiribata, Vanschuytbroeck & Kekenbosch 1760 m (both MRAC).

Remarks: The additional specimens from Parc National Albert differ from the holotype in that the hind femora are only slightly thickened and the keel on the hind trochanter is not pronounced.

Tomosvaryella transvaalensis sp. n.

Fig. 34

Body length 2,4 mm; wing length 2,5 mm.

Diagnosis: Male hind trochanters with triangular process, covered with short hairs; abdominal terga metallic black, lateral margins sparsely greyish dusted; abdominal sternum 8 without dorsal suture, membranous area narrowed; surstyli subsymmetrical, broadened apically; epandrium constricted medially; one ejaculatory ductulus longer than others and coiled.

Male:

Head: Third antennal segment long-acuminate, brown. Second antennal segment black-brown. Frons, eyes touching for 1,5 times length of ocellar triangle; lower part occupying half of entire length, dark, sparsely greyish pubescent; upper part shining black. Face dull dark, sparsely silver-grey pubescent. Occiput with upper third lightly brownish pubescent; lower part silver-grey pubescent.

Thorax: Humeri yellow. Mesonotum dull, bronze metallic, brownish dusted, anteriorly more greyish; dorsocentral rows with indistinct short dark hairs. Scutellum same colour and dusting as centre of mesonotum. Halteres yellow.

Legs: Dark; knees yellow with basal fourth of tibiae yellow. Tarsal segments yellow, apical segment dark. Trochanters with triangular process, covered with short hairs (Fig. 34F).

Wing: Fourth costal section 1,5 times as long as third costal section. Crossvein r-m positioned at middle of discal cell.

Abdomen: Lateral fan with few darkish bristles. Terga metallic, lateral margins lightly greyish dusted; with short dark pilosity. Sternum 8 less than half as long as tergum 5. Sterna dark brown. Membranous area narrow. Terminalia (Fig. 34) with surstyli subsymmetrical, broadened apically; ejaculatory duct trifid, one ductulus longer and coiled; epandrium constricted medially.

Female: Unknown.

Material examined: Holotype ♂, SOUTH AFRICA: Transvaal, Rustenberg Nature Reserve, 17–20.iii.1980, Eardley, Harrop & Moolman (SANC). Paratype: 1 ♂, same date and locality as holotype (SANC).

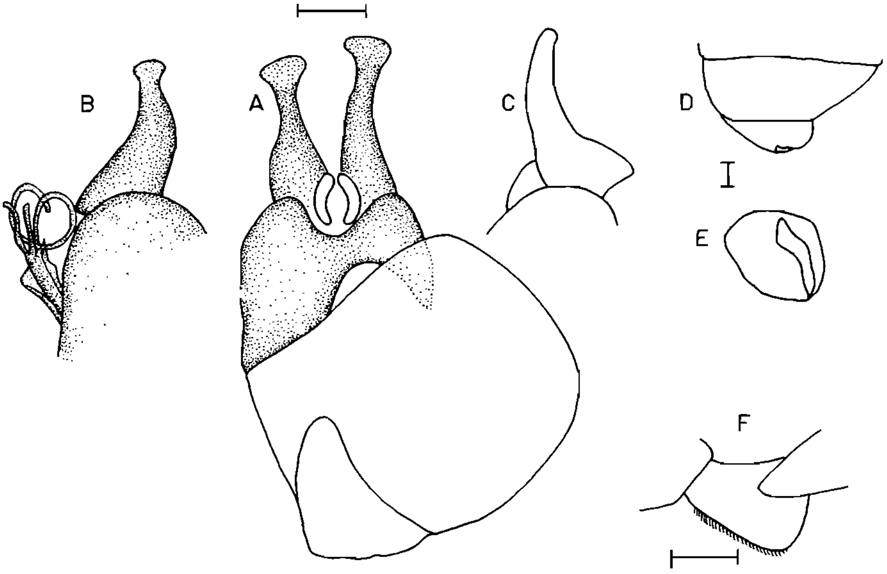

Fig. 34. *Tomosvaryella transvaalensis* sp. n. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

Tomosvaryella tridens Hardy, 1950

Figs 35 & 38L

Tomosvaryella tridens Hardy, 1950: 50.

Body length 2,8–3,0 mm; wing length 3,1–3,5 mm.

Male:

Head: Missing in holotype. Third antennal segment long-acuminate; dark brown. Frons, eyes touching for half the length of ocellar triangle; lower part silver-grey pubescent; upper part shining black. Occiput with upper half shining black; lower part silver-grey pubescent.

Thorax: Humeri whitish yellow. Mesonotum shining black-brown; dorsocentral rows with short black hairs.

Legs: Dark; knees narrowly yellow. Hind trochanter with 2 protuberances (obscured in holotype), basal rod-like and apical shorter tooth-like, basal part of hind femora with sharp tooth-like protuberance ventrally (Fig. 35F).

Wing: Fourth costal section 2,0–3,0 times as long as third costal section. Crossvein r-m positioned just before middle of discal cell.

Abdomen: Terga shining black; with short dark pilosity especially along lateral margins, less pilose medially. Terminalia as in Fig. 35.

Female: As male except for the following characters. Frons with deep groove, silver-grey pubescent in lower half, gradually disappearing, in front of ocellar triangle shining black. Fore femora basally with 2 ventral spines. Terminalia as in Fig. 38L.

Material examined: Holotype ♂, ZAÏRE: Kivu, Rutshuru, 16.x.1934, de Witte 1285 m (MRAC). Allotype: ♀, same locality as holotype, 4.vii.1935, de Witte 1250 m (MRAC). Other material: SOUTH AFRICA: *Natal*: 1 ♂, St Lucia nat. Res., coastal bush and forest, 18–20.xii.1980, Londt & Stuckenberg; 1 ♂, Ramsgate, riverine bush, 11–20.i.1985, Londt; 1 ♂, La Mercy, Umhloti, coastal bush, 24.vii.1963, Stuckenberg (all NMSA).

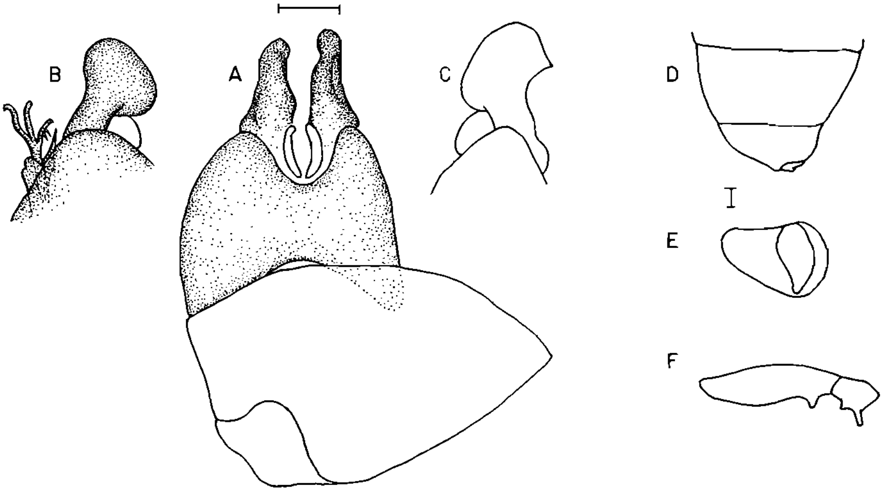

Fig. 35. *Tomosvaryella tridens* Hardy, 1950. A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind leg, frontal view. Scale = 0,1 mm.

Tomosvaryella vicina (Becker, 1900)

Fig. 36

Pipunculus vicinus Becker, 1900: 238.

Body length 3,0 mm; wing length 3,3 mm.

Male:

Head: Third antennal segment acuminate, pale brown. Frons, eyes touching for twice the length of ocellar triangle; lower part silver-grey pubescent; upper part shining black. Occiput with upper half sparsely brownish pubescent, subshining black; lower part more densely silver-grey pubescent.

Thorax: Humeri whitish yellow. Mesonotum weakly subshining black-brown, mainly brownish dusted; dorsocentral rows with short but distinct dark hairs.

Legs: Dark; knees yellow with basal third to fourth of tibiae yellow. Hind trochanters with keel-like structure, with small hairs (Fig. 36F).

Wing: Fourth costal section as long as third costal section. Crossvein r-m positioned near middle of discal cell.

Abdomen: Terga subshining black-brown; brownish dusted, along lateral margins narrowly greyish; with conspicuous dark pilosity. Terminalia as in Fig. 36.

Female: Hardy (1961) mentioned females from Parc National de la Garamba, which were associated with male *T. vicina* and possibly are this species. According to Hardy they are similar to *T. subvirescens* but the ovipositor is distinctly longer and extends almost to the base of the abdomen (no figure given).

Material examined: Holotype ♂, EGYPT: Luxor, '4629 II' (ZMHB).

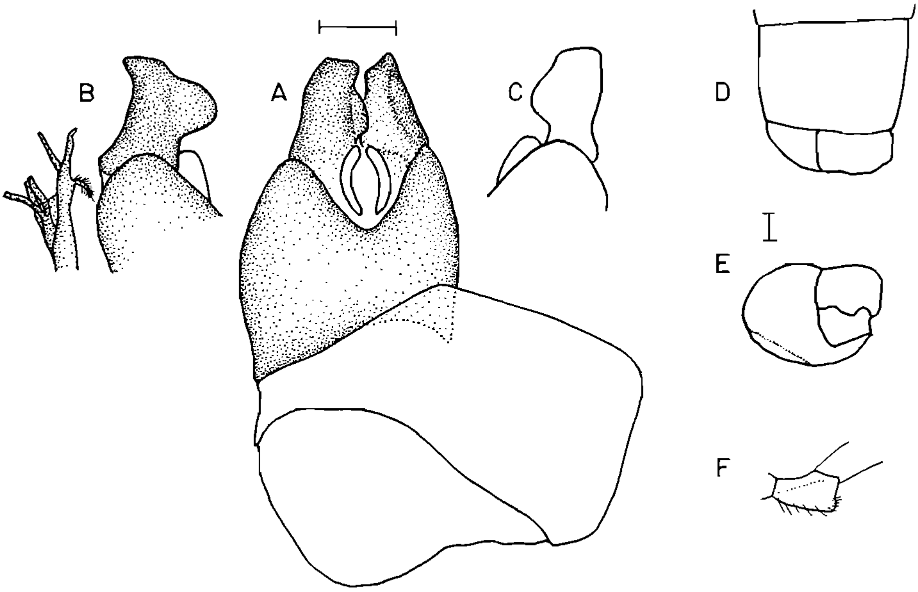

Fig. 36. *Tomosvaryella vicina* (Becker, 1900). A. Male terminalia, dorsal view. B. Outer surstylus with aedeagus and ejaculatory duct, lateral view. C. Inner surstylus, lateral view. D. Male tergum 5 and sternum 8, dorsal view. E. Male sternum 8, distal view. F. Male hind trochanter, frontal view. Scale = 0,1 mm.

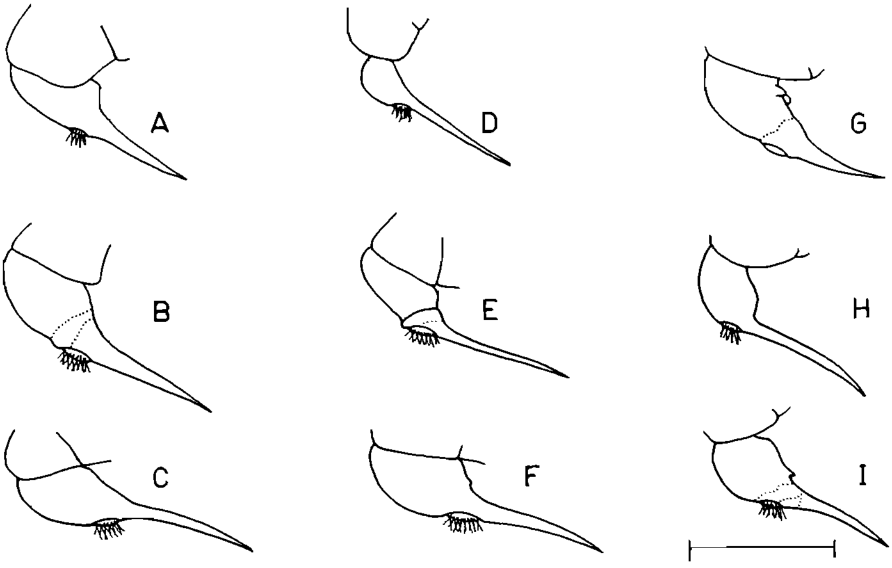

Fig. 37. Female terminalia. A. *Tomosvaryella africana* Hardy, 1949. B. *T. anomala* Hardy, 1949. C. *T. apicalis* Hardy, 1949. D. *T. basalis* Hardy, 1950. E. *T. brachybasis* sp. n. F. *T. comaousa* De Meyer, 1990*b*. G. *T. congoana* Hardy, 1950. H. *T. forchhammeri* sp. n. I. *T. insulicola* sp. n. Scale = 0,5 mm.

DISCUSSION

Hardy (1949 1950 1961) divided the Afrotropical *Tomosvaryella* species into several groups in his keys, based on phenetic differences like the absence or presence of pilosity and/or pubescence, and the shape of the hind trochanters. Detailed study of the male genitalia has shown that these phenetic differences do not necessarily reflect a phylogenetic relationship. In general, it seems that the shape of the protuberances on the hind trochanters can show considerable variation.

Based on similarities in the male genitalia I could recognise several groups of apparently related species. The following three distinct groups could be differentiated.

The *subvirescens* group is recognised by the membranous area being strongly directed to the right side of abdominal sternum 8, the ejaculatory duct being moderately long, trifid and strongly coiled, and the surstyli highly asymmetrical (except *T. singuloides*). The group includes *subvirescens*, *tecta*, *singula* and *singuloides*, and shares some characters with *incondita*, *parvicuspis* and *tridens* (eg. shape of epandrium (medially constricted) and inner surstylus with median protuberance in lateral view). These latter species are presumably related to those of the *subvirescens* group.

The *africana* group is recognised by the dorsal suture of the abdominal sternum 8, the ejaculatory duct being short and trifid with two strong teeth on one ductulus, and the shape of the surstyli with the inner surstylus being distinctly curved inwards

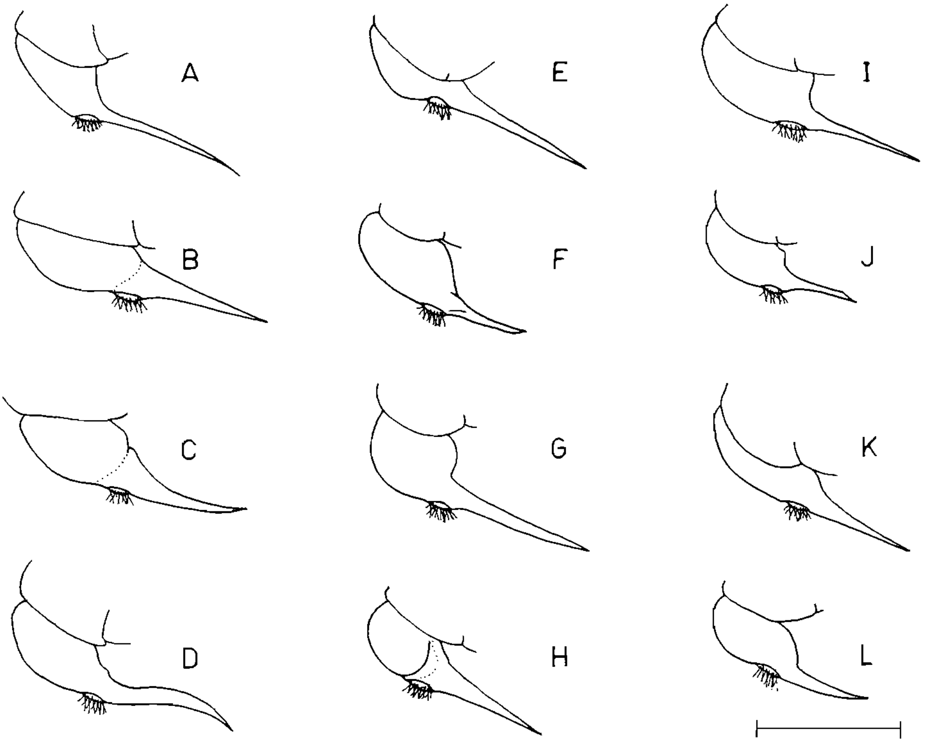

Fig. 38. Female terminalia. A. *Tomosvaryella mbuyensis* Hardy, 1952. B. *T. mesostena* Hardy, 1961. C. *T. oligoseta* sp. n. D. *T. parvicuspis* Hardy, 1961. E. *T. propria* Hardy, 1949. F. *T. singula* Hardy, 1950. G. *T. speciosa* Hardy, 1949. H. *T. subafricana* sp. n. I. *T. subvirescens* (Loew, 1872). J. *T. sylvaticoides* (Lamb, 1922). K. *T. tecta* sp. n. L. *T. tridens* Hardy, 1950. Scale = 0,5 mm.

apically. This group includes *africana*, *subafricana* and *crassifemorata*. Also related to it may be *setositora*, *insulicola* and *ruwenzoriensis*.

The *ancylostyla* group is mainly differentiated by the shape of the subsymmetrical surstyli, which are strongly curved downwards in lateral view, and the inner surstylus being directed outwards and being longer than the outer surstylus in most cases. The body often has a shining and/or metallic appearance. This group includes *ancylostyla*, *angolensis*, *caerulescens* and *forchhammeri*, and most likely also *oligoseta*, although the latter species differs in having symmetrical surstyli. The undescribed species from Cameroon (see under *caerulescens*) also possibly has affinity with the *ancylostyla* group.

T. propria, *T. singularis* and *T. spinigera* also form a distinct monophyletic group, characterised by the large symmetrical surstyli and the very elongate and trifid ejaculatory duct. In addition, there is a group of species recognised by having long and slender surstyli (inner surstylus usually slightly longer than the outer surstylus) but with no other apparent features in common. The following species can be grouped here: *latitarsis*, *mesostena*, *mbuyensis*, *comaousa*, *flavipes* and *apicalis*.

There are some other characters shared by a number of the species in the group (eg. narrow shape of the membranous area in *flavipes* and *latitarsis*; the long, trifid and toothed ejaculatory duct in *latitarsis* and *mesostena*, or the extremely long and thin surstyli in *mesostena* and *mbuyensis*), but not by all. It seems therefore preliminary to propose any phylogenetic relationship between these species. The other Afrotropical representatives do not seem to show any relationship with other species from this region.

A recent study of the Neotropical *Tomosvaryella* fauna (Ale-Rocha 1991) shows that the vast majority of Neotropical species belong to the *africana* group. These all share the characteristic dorsal suture of the 8th abdominal sternite and have a similar ejaculatory duct, but show a wide range in the shape of the surstyli and processes of the hind trochanter. In addition, the cosmopolitan *T. subvirescens* is also present here, as well as a few additional species that do not seem to be related to any of the Afrotropical groups here recognised.

A broader, worldwide revision of the genus is necessary, before any further extrapolations of phylogenetic relationships between the different species and groups can be formulated.

ACKNOWLEDGEMENTS

I would like to thank the various curators and institutions who put material from their collections at my disposal. Special thanks to Dr. R. Bagine and Mr. M. Mungai of the Invertebrate Department of NMKE for their assistance and for providing working facilities. Thanks also to Mrs R. Ale-Rocha and Dr. J. A. Rafael for providing a copy of the unpublished MSc thesis on Neotropical *Tomosvaryella*. My study was partly financed by a grant (ref. V 3/5 DE. D 9 259 - 1991) of the Nationaal Fonds voor Wetenschappelijk Onderzoek, Brussels (Belgium).

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Date received: 20 January 1993